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ABSTRACT

This exploratory study of vocational education teachers' preparation to improve students' basic skills was based on previous work conducted by the National Center for Research in Vocational Education. Eleven questions about basic skills were developed and asked in interviews conducted with a total of 46 faculty and 165 students at nine vocational teacher education institutions. In addition, catalogs from the institutions were reviewed for mention of requirements related to instruction in providing basic skills assistance to vocational students in teacher education programs. Most vocational teacher education students interviewed felt they were prepared to teach basic skills to their secondary vocational students, by virtue of their personal preparation and grasp of the skills, rather than as a result of specific teacher training in teaching such skills. Vocational teacher-students also gained some limited preparation for teaching basic skills through life experiences such as from employment and from their parents. The teacher education students generally thought that they had a responsibility to improve their students' basic skills, although the amount and type of such commitment varied widely. Some potential teachers expressed concern about lack of time for teaching such skills in vocational programs. The study suggested that further research is necessary to determine where basic skills should be taught, how vocational teachers are teaching such skills, and what inservice as compared to preservice teachers think about this topic, among other suggested research areas. (KC)

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VOCATIONAL EDUCATION TEACHER PREPARATION TO IMPROVE SECONDARY STUDENTS' BASIC SKILLS: AN EXPLORATORY STUDY

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FOREWORD

Public concern and legislation have increased vocational educators' obligation to make certain their programs are assisting vocational students in improving their basic skills. In response, efforts both to identify and to teach the teacher skills necessary to meet the basic skills instructional needs of students have been undertaken in recent years. The study reported in this document describes the responses of vocational education faculty and undergraduate students at nine teacher education institutions to questions about the basic skills area.

The intended audience for this report is vocational teacher educators, along with educational researchers and developers. These groups should find the information in the report useful in looking at vocational teacher education programs in terms of preparing of vocational teachers to assist with basic skills problems.

The research effort was conducted in the Development Division under the direction of Lucille Campbell Thrane. Louise Vetter served as Project Director and is senior author of this document. Dr. Vetter holds a Ph.D. in counseling psychology from The Ohio State University and has been involved in vocational education research for sixteen years. Cheryl Meredith Lowry and Patricia Worthy Winkfield are both Research Specialists at the National Center. Dr. Lowry and Dr. Winkfield hold Ph.D. degrees from The Ohio State University, where Dr. Lowry specialized in educational communication and Dr. Winkfield specialized in adult education. Dr. Billie J. Hooker, now working with the United Negro College Fund in Chicago, worked on this project while a graduate student in educational administration at The Ohio State University. Rodney K. Spain holds a master's degree in journalism from The Ohio State University and is a Program Associate at the National Center.

In addition to the authors, the National Center is indebted to the individuals who served on the study's technical panel, to those who coordinated the interviews at the sites, and to those who reviewed this document. The technical panel was composed of James Dunn, Cornell University; Everett Harris, University of Vermont; and James L. Wright, University of Southern Maine. Site coordinators were: William Thompson, Fairmont State University; Robert Harris, Indiana University; Larry McClellan, University of Louisville; Thomas Bicanich, University of Pittsburgh; Robert M. Peters, University of Maryland; Lee Hall, Radford University; Jack T. Humbert, Western Michigan University; Charles Nichols, Kent State University; and Joyce Felstenhausen, Eastern Illinois University. Those who reviewed this report were Edythe D. Conway, Cornell University; Franklin J. King, University of Missouri; C. Glenn Pearce, Virginia Commonwealth University; and Susan Imel, Robert E. Norton, and Michael E. Wonacott of the

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Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

EXECUTIVE SUMMARY

Employers want and need employees who have excellent (or at least adequate) basic skills. There is a broad consensus that the relationship of basic skills to employability is a critical one. It has been widely recommended that vocational education teachers share in the responsibility for developing these skills among their students.

This exploratory study of vocational education teachers' preparation to improve students' basic skills was based on previous work conducted by the National Center in the area of performance-based teacher education. Competencies identified in the basic skill areas of reading, writing, oral communication, math, and survival skills were used as the basis for developing eleven research questions to be explored in this study.

Nine vocational education teacher education institutions were selected as sites for interviews with vocational teacher educators (faculty) and vocational teacher education majors (students). A total of forty-four individual and group interviews were conducted, with a total of forty-six faculty and 165 students participating in the interviews. Faculty and students represented the vocational service areas of agriculture, business and office, distributive education, health occupations, home economics, industrial arts (including industrial arts education, industrial education, technical education, and technology education), trade and industry, and special needs.

As this was an exploratory study, groups of questions related to the eleven research questions identified were developed. No fixed interview schedule was employed by the two project staff members who visited each site, although questions relating to each of the eleven research questions were asked in the interviews. All of the interviews were audiotaped and notes of the interviews were made by project staff members.

Following verbatim transcription of the audiotapes, two project staff members independently sorted the responses provided by the interviewees to identify the answers provided to the eleven research questions.

In addition to the interviews, catalogs (bulletins) from each of the nine sites were reviewed for mention of requirements related to instruction in providing basic skills assistance to vocational students in the vocational teacher education programs. Three of the sites indicated a course requirement in the teaching of reading. All other courses that would provide such instructional assistance in teaching of reading or the other four basic skills areas (writing, oral communication, math, survival skills) were listed as optional for the vocational education teacher education students.

Faculty and Student Interview Findings

Responses of vocational teacher educators (faculty) and undergraduate vocational teacher education majors to the eleven research questions follow. Although only findings for the entire group are presented here, the report presents findings by the vocational service areas. As this is an exploratory study, responses may have been made to the specific research question itself or to questions that were related to the specific research question.

The reader is reminded that small numbers of faculty members and students were interviewed and that the distribution of people interviewed across vocational service areas was uneven. Thus, while the results reported below are useful for generating discussion and possible analysis of vocational teacher education programs, these results are in no way definitive for vocational teacher education programs across the country.

A. Do preservice/inservice vocational education teachers think they have the teacher competencies necessary to teach basic skills?

Generally, student respondents in all vocational service areas felt they were average or above average in the skills needed to help their students improve in oral communication, survival skills, and math. Agriculture students felt their skills for assisting in reading and writing were below average; industrial arts students felt the same for helping with writing; and special needs students responded similarly for teaching reading.

B. Are preservice/inservice vocational teachers being prepared in their teacher education programs to teach basic skills?

Student and faculty responses indicated that preparing teachers to improve their secondary students' basic skills does not occupy a large place on the agendas of the teacher education programs visited--except to the extent that developing the teacher education students' own basic skills contributes to their secondary students' skill improvement.

In some cases, students and faculty indicated that some instruction on how to teach some basic skills had been infused into courses such as teaching methods and courses on teaching special needs students.

Most of the attention paid to basic skills at all sites visited seemed to consist of developing good basic skills in the teacher education students themselves. Many faculty and students said that they expected the strength of the students' own basic skills to be sufficient to enable them to improve their secondary students' skills.

Since much of vocational education itself was considered to be survival skills education, many students and faculty members perceived that the students were explicitly learning to teach survival skills as they learned to teach vocational education.

The kinds of program experiences that faculty members and students frequently reported as preparation for teaching basic skills were giving oral reports in class; writing term papers and other assignments; student teaching; demonstrations done by faculty and students; modeling of desired teaching behavior by faculty; activities of student vocational organizations; speakers who address such matters as developing classroom materials appropriate for the reading levels of some secondary students; and courses (business math, business communication, technical writing, and speech courses) that relate to some basic skill areas.

C. How are the skills that vocational teachers need in order to teach basic skills identified?

Vocational teacher education faculty interviewed obtained information from numerous sources to help them identify skills that vocational teachers need in order to teach basic skills. These sources include published research, competency-based materials, state education requirements, feedback from students in the field and vocational teachers, and the knowledge and experience of faculty members themselves.

D. Which vocational education service areas have been active in teaching basic skills teacher competencies?

Generally, there was some activity in teaching basic skills teacher competencies across the service areas and across the basic skills areas. However, there were wide variations in the amount of activity at different sites within the same service area and also within the same site. Sites in states where a course on teaching reading was required did, of course, show uniformity in that requirement. At one site, a technical writing course was required of all university students, including those in all of the vocational service areas. In contrast to the state-required reading courses, this technical writing course was taught by a vocational education faculty member.

As indicated in the earlier discussion of research question B, much of the activity relating to basic skills centered around developing the basic skills of the vocational teacher education students themselves. Student group activities (e.g., in collegiate DECA) and remedial services available through the universities were often mentioned as being useful in this effort. There was some faculty discussion of the possibility of raising admission standards, thereby assuring a higher level of basic skills in the vocational teacher education students.

In only one service area (industrial arts) was any mention made of national recognition of basic skills concerns in vocational education. Two faculty members pointed out that the new Standards for Industrial Arts Programs (Dugger et al. 1981) study included some recommendations for basic skills. Use of math materials from the Interstate Distributive Education Curriculum Consortium (IDECC) was mentioned by one distributive education faculty member. Although potentially a national effort, membership in IDECC is optional by state and at present, according to IDECC staff, only a few more than half (29) of the states hold membership in IDECC.

E. What experiences external to their teacher education programs are preparing preservice/inservice vocational education teachers to provide instruction in basic skills?

General university requirements and electives in such areas as English, math, speech, technical writing, sociology, and psychology were cited as providing the content knowledge necessary in preparing students to teach basic skills. Participation in youth groups, clubs, and professional organizations was identified as a means for vocational students to develop leadership and communication skills.

Several students mentioned the influence of their parents in stressing the importance of a good foundation in basic skills throughout their lives. Students also indicated that their family relationships as parents and as other relatives of children had placed them in a position to gain experience as tutors in math, reading, and writing. Many students had also found their work as adult leaders of youth groups in church, 4-H clubs, and scouting to be good preparation for their later work as educators. Tutoring was mentioned as a valuable experience that prospective teachers can obtain by working with foreign students on the college campus and through volunteer work in community agencies and schools.

Employment was considered helpful by students and faculty because it requires students to use the basic skills themselves and exposes them to "real-life" experiences. Athletics and other extracurricular activities were noted as good avenues for the development of leadership and interpersonal skills.

Students expressed a need for more field experience as preparation for student teaching and specific methods courses to teach them how to help their students with basic skills. They suggested courses on diagnosing reading problems, grammar courses, and a minicourse on how to teach all of the basic skills.

F. What techniques are being used to train teachers to teach basic skills?

Techniques frequently mentioned by students and faculty members include the performance-based curricular approach,

contract learning, roleplaying, lectures, drills, field trips, and audiovisual presentations.

G. Which basic skill areas do vocational teacher education programs seem most interested in training their teachers to teach?

Across all the service areas and all the sites visited, the oral communication area was mentioned most often by both faculty and students in responses to questions related to this research question. The next most often mentioned basic skill area was survival skills, with students providing this response more often than faculty. The other three basic skill areas were mentioned less often by both faculty and students, with writing having the third number of mentions, reading fourth, and math fifth.

H. Which basic skill areas do vocational teacher education programs seem least interested in training their teachers to teach?

Across all the service areas and sites visited, math was mentioned most often by both faculty and students in responses to questions about the basic skill area least emphasized by the vocational teacher education programs. The other four basic skill areas were mentioned less often by both faculty and students, writing second, reading third, survival skills fourth, and oral communication fifth.

I. How have vocational teacher educators acquired the capability to train teachers to teach basic skills?

Faculty responses were in five areas: undergraduate and graduate preparation, previous employment experience, secondary school experience, professional development, and interaction with colleagues.

J. Do preservice/inservice vocational educators think they have a responsibility to improve their students' basic skills?

In general, most of the responses were affirmative, whether they were analyzed by site or by occupational service area across sites. Clearly, more of the teacher education students interviewed think vocational teachers are responsible for improving their secondary students' basic skills than think otherwise.

The teacher education students who answered affirmatively often said that others also bear responsibility for improving students' basic skills. Those they cited as sharing responsibility were other secondary school professionals (such as academic teachers, counselors, specialists, and administrators), the secondary students themselves, and the students' parents.

Several teacher education students who said they think vocational teachers are responsible for basic skills indicated that the responsibility may extend only to a limited number of basic skills areas and only to limited steps the vocational teacher is responsible for taking in order to improve a student's skills. The basic skills areas for which these teacher education students believed vocational teachers were responsible were survival skills and oral communication. The steps to be taken to improve secondary students' basic skills were identification of students with basic skills problems and referral of such students to other teachers or specialists who could help them.

K. Do vocational teacher educators think they have a responsibility to train their students to teach basic skills?

Faculty responses could be placed in three categories: (1) vocational teacher educators, among other professionals, have this responsibility; (2) vocational teacher educators are responsible for teaching very limited aspects of how to improve secondary students' basic skills; and (3) vocational teacher educators are not responsible for teaching their students how to improve the basic skills of secondary students.

Implications for Further Study

While the results of a limited, exploratory study such as this cannot be considered definitive, they do offer guidance for additional research. Implications for further study are summarized in the thirteen questions listed below.

1. Would a national, representative study confirm the findings of the exploratory study?

2. Is having good basic skills oneself sufficient preparation for improving secondary school students' basic skills?

3. Can vocational teacher education students demonstrate the competencies needed to assist secondary students with basic skills problems?

4. How aware of the complexity of the task of assisting students with basic skills problems are vocational teacher educators and vocational teacher education students?

5. How different would the responses of vocational teacher education students be after two years of secondary school classroom experience?

6. Is the concern about whether vocational teachers would have enough time to assist their students with basic skills problems a valid concern?

7. Are oral communication and survival skills the most important basic skills in vocational education?

8. Do math skills need more emphasis in vocational teacher education programs?

9. Which basic skills problems surface most often in the secondary students enrolled in the various service area programs in vocational education?

10. What materials on how to teach basic skills are available nationally for vocational teacher educators to use with their students?

11. Will the National Center's Performance-Based Teacher Education modules for assisting students with basic skills problems have an impact on teacher education programs?

12. Why, when both faculty and students indicate that they feel responsible for assisting secondary students with basic skills problems, is so little preparation being provided in vocational teacher education programs?

13. Where is the right place to teach basic skills?

VOCATIONAL EDUCATION TEACHER PREPARATION TO IMPROVE SECONDARY STUDENTS' BASIC SKILLS: AN EXPLORATORY STUDY

INTRODUCTION

There exists today a great deal of literature dealing with the problems of youth unemployment. Similarly, there is an enormous amount of attention being given in both professional and popular literature to the problems of elementary and secondary education. Often these topics are treated as separate and disparate problems. The Carnegie Council on Policy Studies in Higher Education (1979) suggests, however, that the two problems be addressed in conjunction, with particular consideration for the relationship between the two.

It has been well established that success in the job market is strongly related to educational attainment. Difficulties encountered in the world of work by young people stem largely from failure to complete high school or from basic skills deficiencies among those who have graduated.

A 1977 report by the National Assessment of Educational Progress shows a relationship between basic skills proficiency and certain variables considered indicative of success. For example, family income and level of education achieved were proportionately higher for individuals able to exhibit basic skills competencies.

A study by Asche and Vogler (1980) on employer satisfaction revealed that employers were generally dissatisfied with the math, reading, and spelling competencies of vocational education graduates. This dissatisfaction is one indication that technical skill alone is not sufficient in order to be competitive in the labor market. The results of Lusterman's (1977) study echoes these sentiments, adding that business executives are critical of how the nation's schools and colleges have prepared people for work.

Corman (1980) asserts that the ability to read with understanding, write, and compute is critical to employability for students entering the labor market. She sees these abilities as critical also to subsequent learning, upgrading existing skills, and/or retraining, as well as beneficial both to the individual and to society.

It is widely agreed that public school systems have been unsuccessful in providing students with the basic skills necessary for meaningful employment and effective citizenship. The media are filled with documented reports of this failure. There have been recent cases highlighted in the news media of high school graduates suing school systems for not having prepared them adequately to get and hold jobs (Sticht 1978). While these cases have been few, the public criticism of the performance of the public schools in developing literacy skills is widespread and intense. The cry of "Back to Basics" has been taken up by dissatisfied parents, students themselves, and citizens from a broad range of perspectives, including employers.

In response to the public outcry, state boards of education of over half the states in the nation have introduced minimum competency standards for preparing students with the literacy skills needed to cope with the world of work, home, and community outside of school (Sticht 1978). Despite the inauguration of these standards, the responsibility for the teaching of these fundamental skills has not been clearly defined or determined.

According to Matthews and Moody (1978), educators have engaged in "passing the buck" from one level to another. Yet the enormity of the problem suggests that blame for the inadequacies cannot be placed on educators at any one specific grade level.

Warmbrod (1974) refers to studies indicating that vocational education has not succeeded in mounting programs that adequately prepare students to enter the world of work. He attributes this in part to a failure to recognize that training in special vocational skills at the secondary level is insufficient for future employment. One of Warmbrod's premises is that the skills necessary for occupational success include reading, writing, speaking and listening, computation skills, and skill in interpersonal relations (p. 6), as well as technical skills.

The ideas expressed by Warmbrod are supported by the Citizens' Council for Ohio Schools (1982). The Council describes two 1981 studies of Ohio vocational students that explored the issue of basic skills instruction. These studies raised the question of whether "vocational education fever" has led to emphasis on job skills acquisition, while instruction in basic skills has been neglected (p. 22).

Both Warmbrod (1974) and Jones (1972) contend that the problems of preparing students for careers are exacerbated by the separation of vocational and academic areas. Jones (1972) asserts that the motivation of students is impeded by the traditional separation of the two areas. She asserts that students must be convinced that communicative skills are critical to employment success and suggests that the student of carpentry as well as the student of secretarial science must develop this awareness.

The dichotomization of occupational and academic preparation for the student is but one factor in the steady decline in basic skills capabilities of high school graduates. The Carnegie Council (1979) delineates several other significant factors:

1. Basic skills are not ordinarily a part of the school curriculum beyond the elementary grades.

2. Certification requirements for intermediate and secondary school teachers reflect this concept.

3. New subjects crowd the curriculum, with resultant de-emphasis on traditional subjects.

As a consequence, teachers feel unprepared to cope with students unable to perform at acceptable levels of basic skills competency (Larson 1977).

These obvious deficiencies notwithstanding, it has been established that some of the responsibility for basic skills instruction clearly rests with vocational education teachers. Approaches to the solution of the problem vary. Jones (1972) proposes that English teachers and vocational teachers work cooperatively in the same classroom. Another approach is incorporating basic skills instruction into the regular vocational education classes. This approach is the basis for a recently initiated inservice training program for Ohio vocational education teachers (Citizens' Council 1982).

Dunn (1980) submits that vocational education teachers should not be required to become remedial teachers in the sense of assuming responsibility for teaching all the reading skills students lack. They should only be responsible for reinforcing those skills that are specifically relevant to their programs and the occupations for which their students are preparing.

There is broad consensus that the relationship of basic skills to employability is a critical one. It has been widely recommended that vocational education teachers share in the responsibility for developing these skills among their students.

Kowle (1980) states that vocational educators should be concerned that their graduates have all the skills essential for career success. Sawhill (1979) asserts that improvement in these areas will become all the more important with the escalation of technological developments in our society.

There is, therefore, a need to determine to what extent vocational education teachers at the secondary level perceive this responsibility to be part of their obligation as teachers. Moreover, it is important to ascertain whether vocational teacher educators currently view this as a responsibility and prepare prospective and inservice teachers accordingly.

In this context, several questions are raised: What, if anything, is currently being done to prepare prospective and practicing vocational education teachers to assume the responsibility for basic skills instruction? What techniques and strategies are found to be most effective by teacher education programs that address these issues?

Thus, the purpose of this study is to determine the perceptions and attitudes of vocational teacher educators and their students regarding these important issues. Its objective is also to identify existing efforts to incorporate the teaching of basic skills into occupational training programs. Implications from the study should be helpful in the resolution of these vital concerns in vocational education today.

This section of the report includes information on the background of the study, site selection, interview procedures development, conduct of interviews, analysis of the interview responses, and analysis of university catalogs. Information on the findings from the interviews is presented in the following section.

Background of the Study

This exploratory study of vocational education teachers' preparation to improve students' basic skills was based on the National Center's long and distinguished history of work in the area of performance-based teacher education. The first 100 PBTE (Performance-Based Teacher Education) modules prepare teachers for their work in the classroom and in other areas (such as advising student organizations) that are considered part of vocational teachers' responsibilities. In addition to the original 100 modules, thirteen modules that teach teachers how to implement nondiscriminatory instruction were developed from 380 teacher competencies. Six modules intended to help vocational teachers to assist vocational students in improving their basic skills have just been completed. Eighty-five competencies in the areas of reading, writing, oral communication, math, and survival skills were identified and used as the basis for the six basic skills modules. (See Appendix A for a listing of the eighty-five competencies.)

A mail survey study of over 1,000 recent vocational teacher education graduates' self-reported preparation to instruct exceptional students (Lowry et al. 1982) was recently completed. A similar study in the basic skills area was planned. However, such a study was not possible, due to federal regulations regarding data collection.

Thus, this study became an exploratory study, with observations and discussions being limited to nine sites, as described below.

Definition of Terms

The following terms/phrases are defined as they are used in this report to provide clarity for the reader.

Basic skill areas - Reading, writing, oral communications, math, and survival skills.

Survival skills - Such skills/knowledge as: goal-setting ability; decision-making skills; good safety habits; time management skills; the ability to find, obtain, retain, and exit

employment; and an awareness of employees' legal rights and responsibilities.

A teacher competency - A skill a teacher needs.

Teaching basic skills - Helping secondary students to improve their basic skills.

Examples of teacher competencies needed for teaching basic skills are included in Appendix B.

Site Selection

Nine vocational education teacher education institutions were selected as sites for student and faculty interviews. Three factors influenced the selection of the sites: (1) geographic location, (2) number of vocational service areas in which teachers were being prepared, and (3) willingness to participate in the study.

In order to limit travel expenses, each of the schools selected was located within 400 miles of the National Center in Columbus, Ohio. That area, centered in Columbus and with a radius of 400 miles, included all of Ohio, Indiana, Kentucky, and West Virginia, as well as parts of Michigan, New York, Pennsylvania, Maryland, Virginia, North Carolina, Tennessee, and Illinois.

The schools selected as sites differed in the number of vocational service areas for which they prepared teachers. Project staff had originally intended to select three sites that prepared teachers in six or more service areas, three sites that prepared teachers in four or five service areas, and three sites that prepared teachers in one to three service areas. While that precise array of schools was not available, the sites selected did represent schools of differing sizes of vocational teacher education programs. Table 1 displays specific information on the number and kinds of service areas represented at each school site. Programs classified as industrial arts include industrial arts education, industrial education, technical education, and technology education. The program classified as special needs included required coursework on working with disadvantaged and handicapped vocational students. (In order to preserve the anonymity promised to individuals interviewed at these institutions, the sites will be referred to in this report only as sites A-I.)

As can be seen in table 1, the service areas for which the sites most often prepared teachers were business and office education and home economics. Agricultural education and vocational special needs were the vocational teacher education areas

TABLE 1

VOCATIONAL SERVICE AREAS REPRESENTED AT SITES

Sites	No. of Service Areas	Agriculture	Business/ Office	Distributive Education	Health	Home Economics	Industrial Arts	Trade & Industry	Special Needs
A	2				X O	X O			
B	2		X O			X O			
C	3			X O		X O	X O		
D	3		X O	X O				X O	
E	3		X O			X O	X O		
F	3		X O			X O	X O		
G	4		X		X O			X O	X O
H	5	X O	X O			X	X O	O	
I	5		X O	X O		X O	X O	X O	

KEY: X = Students interviewed
O = Faculty interviewed

least represented at sites. Other information about the sites is provided within the sections on the interviews conducted at each site that appear later in this report.

Interview Procedures Development

Project staff developed a set of research questions to be answered by the study, based on the study's objectives. Those research questions follow:

A. Do preservice/inservice vocational education teachers think they have the teacher competencies necessary to teach basic skills?

B. Are preservice/inservice vocational education teachers being prepared in their teacher education programs to teach basic skills?

C. How are the skills that vocational education teachers need in order to teach basic skills identified?

D. Which vocational education service areas have been active in teaching basic skills teacher competencies?

E. What experiences external to their teacher education programs are preparing preservice/inservice vocational education teachers to provide instruction in basic skills?

F. What techniques are being used to train vocational teachers to teach basic skills?

G. Which basic skill areas do vocational teacher education programs seem most interested in training their teachers to teach?

H. Which basic skill areas do vocational teacher education programs seem least interested in training their teachers to teach?

I. How have vocational teacher educators acquired the capability to train teachers to teach basic skills?

J. Do preservice/inservice vocational educators think they have a responsibility to improve their students' basic skills?

K. Do vocational teacher educators think they have a responsibility to train their teachers to teach basic skills?

Once research questions had been determined, project staff decided to use the general interview guide approach to obtain the information to answer those questions. The advantages of this approach, important to this study, are that it is especially useful in conducting group interviews, that it helps make interviewing many different people more systematic and comprehensive, and that it helps keep the interview focused, while still permitting individual experiences and perspectives to surface (Patton 1980, pp. 200-201).

The approach requires the preparation of an interview guide that consists of questions or issue areas to be pursued during the interviews. In the case of this study, the interview guide developed by project staff revolved around the research questions the study was expected to answer. The interview guide can be thought of as a checklist to help the interviewer make sure that the intended issue areas have been explored during the actual interview (Patton 1980, p. 198). It may also be thought of as a configuration that, while not dictating the interview questions verbatim, nonetheless helps the interviewer devise and word questions. Also, an information sheet to be distributed to the interviewees was developed (see Appendix B). It provided definitions and examples of teacher competencies needed for teaching basic skills in the five areas (reading, writing, oral communication, math, and survival skills).

Project staff developed an interview guide and sample interview questions that an interviewer could reasonably derive from the research questions. A technical panel was asked to review these materials to judge whether they were worthwhile, appropriate, relevant, and complete as a whole. The panel was composed of three faculty members of vocational teacher education programs that were not involved in the study. All three were experienced in the area of preparing vocational teachers to improve their students' basic skills. The guide and questions were revised where appropriate, on the basis of the recommendations of this technical panel.

Conducting Interviews

Project staff, in teams of two, conducted the faculty and student interviews at each of the nine sites. One-hour interviews were conducted with students from one service area at a time. Interviews of the same length were conducted with faculty members, usually in groups of approximately five. Unlike students, faculty members were not interviewed separately by service area. Both faculty and student interviews were recorded on audiotape and described in handwritten notes by project staff. In total, forty-four interviews were conducted.

In accordance with the general interview guide approach to open-ended interviewing, the interviewers began each interview by outlining the areas to be discussed with the respondents, using

the information sheet (Appendix B). Having thus set the stage, the interviewers were then free for the rest of the interview to frame their own questions as long as they were seeking information related to answering the study's research questions. They could set their own tone of formality or informality and could ask follow-up questions.

Table 2 presents information on the numbers of faculty members and students interviewed by site and vocational service area. Table 3 shows the sex and minority status of students and faculty members interviewed by vocational service area.

Analysis of the Interview Responses

All forty-four of the interview audiotapes were transcribed verbatim. Project staff interview notes were also typed.

The tape transcripts and staff notes were then sorted, by site and vocational service area within site, for answers provided to the eleven research questions. (Since a specific interview schedule was not used, questions actually asked were related to the eleven research questions but were not necessarily identical to them.) This sorting procedure was carried out independently by two staff members for each research question in order to ensure accuracy.

All of the responses noted were then prepared in typewritten form in order for project staff to proceed with collating the information for presentation in the section entitled "Findings of the Exploratory Study."

Analysis of University Catalogs

As suggested by a member of the project's technical panel, university catalogs (or bulletins) and other materials describing the vocational teacher education programs were obtained from each of the nine sites. These materials were checked for mentions of requirements in the vocational teacher education programs relating to providing instructional assistance in the basic skill areas (reading, writing, oral communication, math, and survival skills).

TABLE 2

NUMBERS OF FACULTY AND STUDENTS
INTERVIEWED BY VOCATIONAL SERVICE AREA AND SITE

	Agriculture		Business/ Office		Distributive Education		Health		Home Economics		Industrial Arts		Trade & Industry		Special Needs		Totals	
Site	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S	F	S
A							1	8	1	5							2	13
B			2	6					2	5							4	11
C					1	6			2	4	1	6					4	16
D			1	6	2	4							2	3			5	13
E			2	5					1	4	1	5					4	14
F			3	6					2	6	2	6					7	18
G				6			3	6					1	6	2	6	6	24
H	1	5	2	14						7	1	3	2				6	29
I			2	6	1	5			1	5	2	6	2	5			8	27
Totals	1	5	12	49	4	15	4	14	9	36	7	26	7	14	2	6	46	165

KEY: F = Faculty
S = Students

TABLE 3

NUMBERS OF STUDENTS AND FACULTY MEMBERS
INTERVIEWED BY VOCATIONAL SERVICE AREA, RACE, AND SEX

	Undergraduate Students						Faculty					
	Men		Women		Total		Men		Women		Total	
	W	M	W	M	W	M	W	M	W	M	W	M
Agriculture	3	0	2	0	5	0	1	0	0	0	1	0
Business and Office	8	1	37	3	45	4	7	0	3	1	10	1
Distributive Education	4	1	10	0	14	1	3	0	1	0	4	0
Health Occupations	1	0	12	1	13	1	2	0	2	0	4	0
Home Economics	0	0	35	1	35	1	0	0	9	0	9	0
Industrial Arts (Industrial Education, Technology Education)	23	1	2	0	25	1	7	0	0	0	7	0
Trade and Industrial	11	0	3	0	14	0	7	0	0	0	7	0
Special Needs	2	0	4	0	6	0	2	0	1	0	3	0
Total	52	3	105	5	157	8	29	0	16	1	45	1

KEY: W = White
M = Minority

FINDINGS OF THE EXPLORATORY STUDY

The findings of the study are presented in two sections: (1) university catalog requirements in basic skills instruction and (2) interview responses by vocational teacher educators and vocational teacher education undergraduate students to the eleven research questions relating to assisting vocational students with basic skills problems. A discussion section completes the report.

University Catalog Requirements in Basic Skills Instruction

University catalogs were obtained from each of the nine sites visited. An examination of these catalogs indicated that the only basic skills area in which vocational education students were required to take coursework related to instruction was reading. Three of the sites showed such a requirement. (A fourth site is implementing a requirement in reading, but it is not included in the current catalog.)

In the other four basic skills areas (writing, oral communication, math, and survival skills), no coursework on instruction in the area was required for vocational education students. Optional courses were available, but the decision to include the courses was left to the individual student.

Faculty and Student Interview Responses

Responses of vocational teacher educators and undergraduate vocational teacher education majors are presented below. The responses are organized under the eleven research questions described previously in the "Procedures" section. As this is an exploratory study, responses may have been made to the specific research question itself or to questions that were related to the specific research question.

The reader is reminded that small numbers of faculty and students were interviewed and that the distribution of people interviewed across vocational service areas is uneven. Thus, while the results reported below are useful for generating discussion and possible analysis of teacher education programs, these results are in no way definitive for vocational teacher education programs across the country.

A. Do preservice/inservice vocational education teachers think they have the teacher competencies necessary to teach basic skills?

With today's concern over students' abilities to read, write, add and subtract, and communicate orally, vocational educators

are interested in their colleagues' ability to help students improve their basic skills. In this study, vocational teacher education students were asked if they felt that they had the ability to teach basic skills.

Responses varied in relation to the service areas in which students were enrolled and in relation to the basic skills discussed. Generally, respondents in all areas felt they had average or above average skills needed to help their students improve math, oral communication, and survival skills.

Respondents from three service areas felt their abilities to teach basic skills were below average in three areas. Agriculture students felt their skills for assisting in reading and writing were below average; industrial arts students felt the same for helping with writing; and special needs students responded similarly for teaching reading.

Agriculture. The five students from one site who responded to this question felt that their strongest abilities were to assist with oral communication and survival skills. They viewed their math teaching skills as average and their reading and writing instructional skills slightly below average.

One respondent explained his method for teaching math: "We will be able to help them, if we can find something to get them motivated and show them that there is a need to learn math. Some of the problems are that the students do not have the desire [to learn]. If a student has a math problem and we begin to balance feed rations, [he/she] realizes the need to do math, and that might be enough to get them to do it."

Another respondent explained his feelings toward teaching all basic skills: "We will be able to teach the basic skills, but we will be teaching them in our own way, through methods of interest instead of [traditional academic instruction]."

Business and office. The forty-nine business and office students from seven sites felt that they were well prepared to teach math and survival skills, almost as well prepared to teach writing and oral communication, and above average in their ability to assist students with reading problems. One respondent had helped to improve English and grammar skills by incorporating the instruction into shorthand classes. To improve reading skills, another respondent had used skills tests found in the school library.

Of the business and office students who felt uncomfortable assisting with some basic skill areas, the respondents usually lacked confidence in teaching reading. Although these students felt they could assist with word identification and pronunciation, they did not see themselves as capable of improving reading speed or comprehension. One student said, "If [students] would have a [basic] question, I would be able to answer it. As far as setting up an individual program for reading, like the method for teaching it, I might not be clear on that."

Distributive education. The fifteen distributive education students interviewed from three sites felt that they had strong abilities to teach survival skills and oral communication. Their confidence with assisting students to read was above average, and their feelings toward teaching writing and math were comfortable but not high.

In order to incorporate oral communications into class work, one student had secondary students role play various selling techniques. Most students indicated that they encourage their secondary students to become involved in Distributive Education Clubs of America (DECA), a distributive education student organization, where much time is spent giving speeches. To improve employability skills, another teacher education student assigned students to write resumes and to fill out checks properly. Assistance with reading came from helping students to pronounce words and from assigning reading material that was written on an appropriate level for the students.

Health occupations. Eight health occupations students from one site were interviewed. Of this sample, most of the respondents felt well qualified to assist with all of the basic skill areas. One respondent felt uncomfortable instructing students in writing. The respondents did not provide examples of their strategies for incorporating basic skills instruction into their class work.

Home economics. Of the thirty-six home economics students interviewed at seven schools, the majority felt highly comfortable teaching oral communication and survival skills. The respondents felt well prepared to assist students with reading problems and viewed their ability to help with math and writing as adequate.

These students discussed methods of incorporating basic skills generally, as opposed to methods of integrating each skill separately. One respondent would incorporate reading, writing, and math while using textbook instruction. Another would help students with oral communication by demonstrating proper presentations during class lecture periods. A third would seek the help of academic teachers to learn effective ways of teaching basic skills.

Industrial arts. The twenty-six industrial arts students interviewed at five sites felt they had a strong ability to help their students with survival skills and oral communication. They viewed their ability to assist students with reading problems as good. They saw their math instructional skills as average and their writing instructional skills as below average.

The respondents tended to agree that it was easy to incorporate some basic skills into industrial arts classes because they were conducted in an open-classroom manner, in which students

work on individual projects. This organization, according to the respondents, was readily adaptable to individualized instruction that could easily include the basic skill area that each student needed to improve. One respondent said, "For a student having slight problems with basic skills, we will be able to individualize the lesson plan enough to help the student."

Trade and industry. The fourteen trade and industry respondents from three sites felt that they could help students with all basic skill areas. One respondent seriously questioned his ability to assist with reading problems. One respondent said that survival skills are "basically a part of the trade and industrial curriculum. We put a lot of time into sitting down with the students [to work on] goals, safety habits, working with peers, motivation, and work habits."

Survival skills were strongly emphasized by these respondents: "Survival skills would probably be one that we would get into a lot in mechanics. As far as applying for a job, we have to give students some instruction. A lot of them do not know how to get a job."

Math and reading skills were also strongly emphasized: "We have to be prepared to teach math, particularly math past algebra. We get into trigonometry and, then, electronics. Also, most of our assignments are in reading. We have to point out to the students that technical reading is more difficult than . . . reading conventional material. [The students] have to read slowly because of the technical jargon involved."

Special needs. Six special needs students were interviewed at one site. The respondents indicated that they felt well qualified to assist students with problems in survival skills, oral communication, and math. They felt they had average abilities to help with writing problems but were not optimistic about their ability to help with reading problems. For assistance, the students said they would need to contact a reading specialist.

B. Are preservice/inservice vocational teachers being prepared in their teacher education programs to teach basic skills?

All students (165) and faculty members (46) interviewed were asked questions that reflected this research question. (This question addresses teacher education program experiences only; responses regarding research question E describe experiences related to basic skills that take place outside the teacher education program.) Student and faculty responses concerning research question B indicated that preparing teachers to improve their secondary students' basic skills does not occupy a large place on the agendas of the teacher education programs visited, except to the extent that developing the teacher education students' own basic skills contributes to their secondary students' skill improvement.

At only three sites (A, E, and I) were there required courses designed exclusively to teach how to improve secondary students' basic skills. These were courses on how to teach reading to secondary school students and were required of all secondary teacher education students for state teacher certification. Site C offers such a course and will require it after June 1982.

The other sites did not require courses designed exclusively to teach how to teach reading or any other basic skill area. All teacher education programs at site H, according to the faculty and students interviewed there, were participating in a statewide project designed to ensure that junior high and secondary public school students will be taught survival skills in appropriate classes. However, faculty and students at this site did not report the existence of any courses exclusively designed to accomplish this goal.

In some cases, students and faculty indicated that some instruction on how to teach some basic skills had been infused into other courses, such as methods courses and a course on how to teach special needs students that was offered at a few sites.

Most of the attention paid to basic skills at all sites visited seemed to consist of developing good basic skills in the teacher education students themselves. Many faculty and students said that they expected the strength of the teacher education students' own basic skills to be sufficient to enable them to improve their secondary students' skills.

Of the basic skills areas, survival skills and oral communication were most often mentioned by students or faculty as being most emphasized in the vocational programs visited. Nonetheless, preparation to teach oral communication skills at these sites was usually carried out by developing the teacher education students' own oral communication skills.

Preparation to teach survival skills was perceived somewhat differently by many faculty and students. Much of vocational education itself was considered to be survival skills education. In other words, many students and faculty members perceived that the students were explicitly learning to teach survival skills as they learned to teach vocational education.

The kinds of teacher education program experiences that faculty members and students frequently reported as preparation to teach basic skills may be summarized as follows:

- Giving oral reports in class
- Writing term papers and other assignments
- Student teaching
- Demonstrations conducted by faculty and students

- Modeling of desired teaching behavior by faculty
- Activities of student vocational organizations
- Speakers who address such matters as developing classroom materials appropriate for the reading levels of some secondary students
- Courses (such as business math, business communication, and speech courses) that relate to some basic skill areas (in these cases, math, written communication, and oral communication)

A report of faculty and student responses concerning research question B, arranged by vocational service area, appears below.

Agriculture. Only site H had an agricultural education program. One faculty member and five students were interviewed there. The faculty member at this site said that he helps prepare his students to improve their secondary students' basic skills by modeling desirable teaching behavior. The students said that their own oral communication skill had been developed in their methods courses, where they were required to give several in-class presentations, talks, and demonstrations. In addition, the students said, their methods courses had provided instruction on how to direct their secondary students in giving oral presentations. The students also said that their methods courses had dealt with survival skills.

Business and office. Forty-three students and twelve faculty members in this vocational service area were interviewed at six sites (B, D, E, F, H, and I). Six business and office education students (but no faculty) were also interviewed at site G.

Like their colleagues, the faculty members from this service area emphasized the development of their own students' basic skills. Courses such as business math and business communication were cited as contributing to that development. Faculty at site D said that they worked with their students to develop confidence in speaking. At site E, faculty said they point out to their teacher education students the need for teaching secondary students with poor reading abilities how to use illustrations and to preview difficult reading matter. One faculty member at site H said, "Our work in helping our students teach students how to read is very limited."

The faculty at site I said that their students get experience in all the basic skill areas through projects and other course assignments. Part of their instruction includes learning how to diagnose secondary students' problems in learning the skills involved in business and office education.

The business and office education students interviewed reported, in general, that their teacher education programs had developed their own basic skills (particularly oral communication and survival skills) but had not in other ways prepared them to teach basic skills. The students at site H could not remember any methods courses that included instruction on how to teach basic skills. However, they said that a course on teaching the handicapped had taught them how to get help for secondary students with poor reading skills.

The students at site E said that their program includes discussion about basic skills. One student, however, said "I don't feel they've taught me how to teach." This student had not yet taken methods courses (a six-week series that students at this site take immediately before student teaching).

Distributive education. Faculty members in this service area reported that they model desirable teaching behavior for their students and give assignments such as term papers and oral presentations that build the basic skills of their students. Most attention was focused on building oral and written communication skills. One faculty member at site I said that he doesn't do much with his distributive education students in regard to math. "If they can read the numbers of the questions in the mid-term and final, that's about all . . . ," he said. Survival skills were covered in methods courses at site D.

How to calculate the reading levels of written materials was taught at site C, and that site's distributive education program also included "empathy exercises." For instance, the faculty member explained, students are given material that is difficult to read and asked to present it to their classmates. They thereby experience what it feels like to mispronounce a word in front of a group of people--an experience common among secondary students.

The distributive education students interviewed said that their preparation to teach basic skills had almost entirely consisted of developing their own basic skills. The students at site G reported that some attention was paid to how to teach basic skills in their methods courses.

Health occupations. The faculty member at site A said that she incorporates the development of survival skills into her courses by stressing problem solving. She said that her health students develop their other basic skills (and skill in teaching reading) by taking the required course on teaching reading to secondary students and by taking university-required courses in literature and math.

The health occupations students interviewed at site A said that they had taken four courses related to oral communication skills. At site G, the students reported they had not taken any classes devoted to how to improve basic skills. One student there indicated, "I have not been prepared educationally to teach basic skills."

Home economics. At nearly all the sites visited, the emphasis in home economics was on developing the basic skills of the teacher education students themselves. Several of the faculty members said that they expected their students to teach basic skills the way they had been taught themselves. However, the home economics program at site F seemed to include a considerable amount of instruction on how to teach basic skills, particularly reading. Students there were taught how to identify students with poor basic skills and how to restructure lesson plans to meet those students' needs. Units were provided on how to teach students who require special education, and a home economics occupations course included material on how home economics can play a role in CETA-type programs and in other alternative teaching settings. Students were encouraged to visit secondary schools to talk with teachers who deal with secondary students who have problems with basic skills.

Students interviewed from this service area frequently mentioned courses and course assignments that had developed their own oral communication and survival skills, but nearly all said they hadn't received instruction on how to teach those or other basic skills. One student at site C said, "We don't get enough classes that teach you how to teach." Another at that same site said, "I think there are a lot of things about basic skills teaching that should be required but aren't."

Industrial arts. The faculty reported few courses in which their students were being taught how to teach basic skills. An industrial arts practicum was mentioned at site H as offering some preparation. One technical education faculty member at site E said that if his students were being prepared to teach basic skills, it did not happen in his courses but in the six weeks of teaching methods courses students were required to take immediately before student teaching.

According to the industrial arts students interviewed, their own basic skills have been honed in their programs but not many have been taught how to teach basic skills. The students mentioned that modeling their teaching behavior after their instructors and learning about survival skills had helped prepare them to teach basic skills. A student at site C said, "I don't think our classes have prepared us to teach basic skills, other than having us see instructors that we would like to model ourselves after."

Trade and industry. The faculty in this area said that their students generally learned how to teach survival skills in methods courses and, at site D, in a course on mainstreaming. At site I, training to teach basic skills has been provided through nonrequired summer workshops. Individual workshops on the teaching of each of the basic skill areas have been held. The students in this service area said that what preparation to teach basic skills they had received had come from methods courses.

Special needs. Special needs faculty at site G said that the teaching of basic skills is covered in some methods and vocational courses and that they work with their students individually to develop curriculum materials and to identify appropriate methods of teaching. The faculty said that their help in how to teach basic skills "is not meant to be specific but is an attitudinal thing, making them aware of the weaknesses some secondary school students have and of the need to emphasize the basic skill areas."

The students in special needs at this site said that they had not been taught to teach basic skills. Some had taken methods courses but said that the courses had not included material on basic skills. One student said he/she did not know of any vocational courses that addressed how to improve basic skills. Another student said, "I think every class stressed that your students have to know how to read and write. But they didn't tell us how to teach them to read and write."

C. How are the skills that vocational teachers need in order to teach basic skills identified?

Research question C was asked of vocational teacher education faculty members. Usable responses were obtained from faculty representing six vocational service areas across six of the nine sites visited by project staff. The responses to research question C indicate that the vocational teacher education faculty interviewed obtain information from numerous sources to help them identify skills that vocational teachers need as preparation to teach basic skills. These sources include published research, competency-based materials, state education requirements, feedback from students and vocational teachers in the field, and the knowledge and experience of the faculty members themselves.

Business and office. The two business and office faculty members from site B indicated that state education requirements are used as guidelines in identifying skills that vocational education teachers will need in order to teach basic skills. In addition, business and office faculty noted their involvement with competency-based education for handicapped students. The faculty members expressed a belief that knowledge of competencies needed by handicapped persons in such areas as reading and writing could be beneficial in determining the competencies necessary for typical students.

Distributive education. A total of three faculty members from two sites responded to research question C. The distributive education faculty members said they depend upon state education requirements that outline the responsibilities of vocational teachers and the competencies necessary within an approved program to aid them in determining the skills required. Curriculum guides are also useful to faculty members, as they list duties and tasks of vocational teachers.

Home economics. Faculty members from four sites, totaling six in number, responded to the research question. The respondents indicated that they use state education requirements, feedback from teachers and vocational teacher education students, and information from state supervisory staff to determine the skills needed by vocational teachers to prepare them to help their students with their basic skills.

Industrial arts. Responses were obtained from three industrial arts faculty members at two sites. Faculty members at one site said that they were guided in identifying skills that teachers need to help their students with basic skills by the state teaching requirements for high school instructors. Faculty members from site I listed their own subject matter knowledge, experience, and information obtained from their interaction with teachers in conferences and graduate courses as beneficial in identifying necessary skills.

Trade and industry. The two faculty members from site I stated that the entire trade and industrial education faculty visits schools on an ongoing basis and is, therefore, able to note the problems that vocational teachers are having within their classrooms. This knowledge of existing problems allows the trade and industrial faculty to make determinations about the skills that are needed by vocational teachers to aid them in teaching basic skills to their students.

Special needs. The two special needs faculty members from site H were responsible for teaching two courses required in the vocational education department on the teaching of handicapped and disadvantaged students. The faculty members interviewed listed statewide research study results and feedback from statewide inservice education programs as indicators of skills needed by vocational teachers to help them in teaching basic skills. The faculty members also mentioned national research study results and feedback from vocational teachers and teacher education students as useful sources in identifying essential skills.

D. Which vocational education service areas have been active in teaching basic skills teacher competencies?

No specific questions that addressed this research question were asked directly in the interviews. However, information on the level of activity in teaching basic skills teacher competencies in the vocational education service areas was obtained through the responses to the other questions asked in the interviews.

Generally, there was some activity in teaching basic skills teacher competencies across the service areas and across the basic skills areas. However, there were wide variations in the amount of activity at different sites within the same service

area and also within the same site. Sites in states where a course on teaching reading was required did, of course, show uniformity in that requirement. At one site, a technical writing course was required of all university students, including those in all of the vocational srvice areas. In contrast to the state-required reading courses, this technical writing course was taught by a vocational education faculty member. The reader is referred to the discussions of research questions G and H for specific vocational service area information about which basic skill areas vocational teacher education programs are most (G) and least (H) interested in training their teachers to teach.

As indicated in the earlier discussion of research question B (Are preservice/inservice vocational education teachers being prepared in their teacher education programs to teach basic skills?), much of the activity relating to basic skills centered around developing the basic skills of the vocational teacher education students themselves. Student group activities (e.g., in collegiate DECA) and remedial services available through the universities were often mentioned as being useful in this effort. There was some faculty discussion of the possibility of raising admission standards, thereby assuring a higher level of basic skills in the vocational teacher education students. Specific information, by vocational service area, relating to this issue is provided in the responses to research question F (What techniques are being used to train vocational teachers to teach basic skills?).

In only one service area (industrial arts) was any mention made of national recognition of basic skill concerns in vocational education. Two faculty members pointed out that the new Standards for Industrial Arts Programs study (Dugger et al. 1981) included some recommendations for basic skills. In the "Instructional Program" section of the report, three goals relating to basic skills (including survival skills, as defined in this study) are listed (p. 18):

e. Emphasis is placed upon developing student abilities in the safe and proper use of tools, materials, machines, and processes.

f. Emphasis is placed upon developing student problem-solving and decision-making abilities involving industrial materials, processes, and products.

g. Emphasis is placed upon reinforcing the basic skills and interrelating the content of industrial arts with other school subjects.

Use of math materials from the Interstate Distributive Education Curriculum Consortium (IDECC) was mentioned by one distributive education faculty member. Although potentially a national effort, membership in IDECC is optional by state and at present,

according to IDECC staff, only a few more than half (29) of the states hold membership in IDECC.

For further information on specific vocational service areas, the reader is referred to the discussions of research questions B, F, G, and H.

E. What experiences external to their teacher education programs are preparing preservice/inservice vocational education teachers to provide instruction in basic skills?

A total of fifty-seven vocational teacher educators and 146 vocational teacher education students responded to questions pertaining to research question E. The respondents represented eight vocational education service areas from the nine sites visited. Faculty and students provided extensive information on the types of experiences outside of the teacher education program that prepare vocational teachers to provide basic skills instruction. The responses centered around several general areas of experience that both faculty and students believed to be useful in preparing to teach basic skills.

General university requirements and electives in such areas as English, math, speech, technical writing, sociology, and psychology were cited as providing the content knowledge necessary to prepare students to teach basic skills. Participation in youth groups, clubs, and professional organizations was identified as a means for vocational students to develop leadership and communication skills. Observations in schools and early field experience, prior to student teaching, were noted as ways in which prospective teachers can become more familiar with the school environment and evaluate their occupational choice with greater knowledge of role expectations.

Several students mentioned the influence of their parents in stressing the importance of a good foundation in basic skills throughout their lives. Students also indicated that their family relationships as parents and as other relatives of children has placed them in a position to gain experience as tutors in math, reading, and writing. Many students had also found their life experiences and work as adult leaders of youth groups in church, 4-H clubs, and scouting to be good preparation for their later work as educators. Tutoring was mentioned as a valuable experience that prospective teachers can obtain by working with foreign students on the college campus and through volunteer work in community agencies and schools.

Employment was cited by students and faculty as helpful because it requires students to use the basic skills themselves and exposes them to "real-life" experiences. The survival skills and communication skills of students were believed to be enhanced by work experience and interaction with various individuals on the job. Athletics and other extracurricular activities were

noted as good avenues for the development of leadership and interpersonal skills needed by prospective teachers in working with secondary students. Counseling courses were found to be useful in helping the teacher education students develop a greater understanding of pupils with varying backgrounds and ideas.

Students commented that teacher education faculty serve as examples for them and are often imitated by the students during their practice teaching. These students said they emulate instructors whom they consider exceptional and expect to use the same techniques when they begin to teach.

Continuing education was mentioned as a way of obtaining experiences useful in preparing to teach basic skills. Courses, workshops, and seminars in continuing education could be beneficial to teachers who are seeking inservice training.

Students and faculty members were also asked if they could identify any experiences external to the teacher education program that the students have not had that could be beneficial in their preparation to teach basic skills. Faculty members stressed the importance of work experience for students who have not had the employment that they need. However, in vocational areas such as business and office education and trade and industry education, students are required to have previous work experience.

Students expressed a need for more field experience as preparation for student teaching as well as specific courses to teach them how to help their students with basic skills. They suggested courses on diagnosing reading problems, grammar courses, and a minicourse on how to teach all of the basic skills. One student also stated a need for more varied work experiences.

Students desired opportunities to attend more workshops and conferences. Additionally, several students indicated that they needed more information on problems that may arise in the classroom and how they can be handled.

Agriculture. One agricultural education faculty member and five students responded to research question E. The faculty member stated that the university requires all students to take a technical writing course. He further noted that youth groups such as the Future Farmers of America build leadership and give the students experience in working with other youth group members to improve their skills.

Two of the agriculture students responded that their tutoring of younger siblings has provided them with helpful experience in teaching basic skills. In addition, two students indicated that

their academic training from elementary school, high school, and college contributed to their preparation to teach basic skills. Competitions such as speech contests were mentioned as an aspect of FFA that enhances basic skills.

Business and office. A total of ten faculty members from five sites and forty-nine students from seven sites responded to research question E. Many students and faculty pointed out the importance of university general education requirements and electives in departments other than vocational teacher education that focus on such areas as speech, English, math, and psychology. However, one student from site I stated that there is no time available within the program to take electives. Other students from site I agreed that little time is available for courses outside the program area.

Several business and office students mentioned the benefits of public speaking in developing good oral communication skills. One student had recently won a national award in public speaking. Professional organizations and clubs were identified by both students and staff as a means for students to obtain experience in debating and oral communication, and to develop leadership/organizational skills. Organizations such as Phi Beta Lamda, Phi Kappa Phi, state education and vocational associations, and Future Business Leaders of America were mentioned.

One student found a career decision-making course to be useful and noted the emphasis placed on using reference materials in the library to seek information. Seminars, workshops, and conferences were identified as good experiences for students. The overall education of students, from elementary through college, was mentioned by six students and two faculty members as a major contribution to the students' preparation to teach basic skills. Field experience and student teaching were cited extensively by students and faculty members in response to research question E. Two faculty members at site H noted that students often use the educational lab to videotape the lessons that they teach and, thus, evaluate themselves.

Life experiences cannot be ignored for their impact on the preparation of students to teach basic skills. Students repeatedly expressed the significance of their home life, familial relationships (as parents or siblings), and personal experiences in their development and preparation to teach basic skills.

Students described their work experience in business, university residence halls, sales, and counseling as assets, and faculty members were in agreement on the importance of such experiences. Students from site I indicated that a year of work experience is required for certification in business and office. One student had been a salesperson in a foreign country and another student had served as trainer for new employees at her work site.

Volunteer experiences in Bible schools and with such groups as the Parent Teachers Association, Boy Scouts of America, and Girl Scouts of the U.S.A. were referred to by several students as beneficial to them in preparation to teach basic skills.

One faculty member stated that not all students get the type of work experience needed to prepare them to teach basic skills in the vocational classroom. Students had several suggestions for experiences that they thought would be beneficial in preparation to teach basic skills but that had been unavailable to them. Students from site I expressed a need for more workshops and site B students were interested in taking courses to enable them to detect secondary students' reading problems and to know what action to take. Additionally, site I student respondents desired more information from faculty members on the negative aspects of teaching or problems that they might encounter in the classroom. They felt a need for more information on how to handle discipline problems because lack of control in the classroom would hamper them in teaching basic skills. Students from site I stated that field experiences much earlier in the program, including more experience observing in secondary schools rather than elementary, would be of great assistance to them.

Distributive education. Project staff obtained responses to research question E from four distributive education faculty members and fifteen students from three sites. Two distributive education faculty members commented on the relevance of the Distributive Education Clubs of America in preparing students to teach oral communication. One student from site C added that his oral communication skills were enhanced by leadership activities and opportunities to conduct seminars and teach adults. The electives that students take in other departments, work experience programs or practicums, workshops, student teaching, and volunteer work were also identified by faculty as experiences external to the teacher education program that contribute to students' preparation to teach basic skills. Students from site C stated that they must take math or science because of a general education requirement. They are also required to have the equivalent of two years of full-time employment in order to be certified in distributive education.

One student from site C said that his work experience in fast foods, sales, and manufacturing had prepared him to help students in determining their career goals. Another student from site C taught employability skills to special needs adults in a CETA program and thus learned a great deal about people. Another student from Site I had a unique experience of teaching mentally handicapped adults and noted that the deficiencies that the vocational teacher education students have themselves can aid them in relating to those who have similar problems. This thought was reiterated by a student from site C who said that she had always been a slow reader with poor vocabulary and thus was certain she would be more patient with students who have reading problems.

Health occupations. One health occupations faculty member and fourteen students from two sites discussed the research question with project staff. The health occupations faculty member summed up her thoughts by saying, "Everything that the students do will affect their ability to communicate and to interrelate to people--their home environment, cultural background, community activities, experiences with professional associations, and reading of journals." One student from site A supported the faculty member's statement, commenting that a combination of all the experiences students have contributes to their preparation to teach basic skills. The student also indicated that as health occupations students they had not taken a course specifically for teaching basic skills.

Other students at sites A and G referred to elementary school and high school training, as well as continuing education, as providing the academic preparation necessary to teach basic skills. One student noted that work experience can help in the awareness of survival skills.

Numerous other experiences were cited as beneficial to students in their preparation to teach basic skills: (a) tutoring in volunteer programs, (b) daily activities and life experiences, (c) volunteer work such as a Girl Scout leader and Bible school teacher, (d) workshops/instruction in interpersonal relations and counseling, and (e) summer work with underprivileged youth. Students mentioned the positive influence of observing their college professors as instructors. Parents were also cited as influential when they stressed the value of basic skills to the students as they were growing up. Students mentioned their roles as parents and siblings in tutoring family members as good preparation for teaching basic skills.

One health occupations student from site H said that her interesting experience, serving as a volunteer tutor for a perceptual learning disability class for dyslexic and kinetic children and adults, was a good preparation for teaching basic skills. One student from site A responded to the question about experiences that they have not had but would like to have in preparation to teach basic skills, saying that a "crash" course on teaching basic skills and experiences at more types of jobs would be beneficial.

Home economics. A total of seventeen home economics students from seven sites and twenty-seven faculty members from five sites responded to the research question. Faculty members provided responses similar to those given by faculty from other vocational education service areas.

The advantages of student involvement in professional associations, social/service clubs such as sororities and fraternities, and athletics were discussed. The value of work experience in

preparing vocational students to teach basic skills was mentioned by faculty and students. Faculty members from site B described inservice education workshops that are sponsored by the state department of education as beneficial for teachers already in the field. In addition, teachers can avail themselves of regional workshops with state supervisors. One faculty member from site F explained how field experiences enable students to obtain a more realistic assessment of the ability of the students that they will be teaching. The faculty member commented that "many students assume that everyone is as smart as they are and sometimes have trouble dealing with the reality that many students can't read and don't write very well."

The teacher education students identified a myriad of experiences external to their teacher education program as being helpful to them in their preparation to instruct students in basic skills. Parental influence, high school and college academic preparation, debating team involvement, and work experience were mentioned. One student from site B explained that her work on the staffs of her school newspaper and yearbook had helped her with writing skills. Several students from sites C, F, H, and I noted that their work with youth groups such as Girl Scouts of the U.S.A. and 4-H Clubs had been good experience for working with young people and developing communication skills. Involvement in the Future Homemakers of America was cited as helpful in increasing leadership and oral communication skills.

One student from site C had been tutoring her Vietnamese roommate in English and found that she had learned a great deal from that teaching experience. Several courses were identified by students from site C as important to their preparation to teach basic skills. The students said that a course concerning the teaching of reading is now an elective but will be required in 1983. Another course in health education dealt with survival skills. Work experience was mentioned by students from all seven sites as an essential aspect of their preparation to teach basic skills. One student from site C described how her work in training new employees at a restaurant had benefited her. A student at site H believed that her personality had been useful in her preparation to help vocational students with their basic skills. She said that she has what she called a "teaching" personality that seems to translate to all situations.

One experience that students from site B said that they have not had but would find useful would be to have their lab work on-the-job with a variety of people rather than just with the home economics faculty. One student from site H said that she would have liked to have had a college course in grammar. Another student from the same site added that her high school and college background in writing, grammar, and spelling should have been better.

Industrial arts. Project staff obtained responses to research question E from six industrial arts faculty members at three sites and twenty-six students at four sites. Industrial arts instructors were able to identify several experiences outside of the teacher education program that contribute to the preparation of vocational students to provide basic skills instruction. They said that teacher education students develop academic skills and professionalism through completion of a technical writing course requirement; classroom observation in area schools, and participation in workshops and counseling programs centering on special needs populations and student organizations such as the American Industrial Arts Student Association (AIASA).

The industrial arts students from sites C, E, G, and I had similar responses. Students from each site mentioned the importance of extracurricular activities, academic training in high school and college, volunteer work with young people, tutoring, and previous employment in preparing them to teach basic skills.

One student from site G stated that he owned a business and had helped some of his workers with their basic skills. Students from site G said that they are encouraged to take advanced psychology and sociology courses to enhance their program. Other examples of valuable experiences that were identified by industrial arts students, as well as respondents from other service areas previously described, included tutoring siblings and foreign students and supervising workers.

Trade and industry. A total of six trade and industrial instructors and fourteen students responded to research question E. Completion of academic courses in related basic skills areas and participation in youth groups such as the Vocational Industrial Clubs of America were noted by faculty and students from sites D and I as experiences that prepare students to provide instruction in basic skills. Faculty from site H stated that the university requires that a technical writing course be taken by all university students.

A faculty member explained that teacher education students are required to have seven years of industrial experience in trade and industry education. To fulfill this requirement, students would have gone through a formalized training program of at least four years--an apprenticeship program. An integral part of the training is that students would have taken mathematics and, in some cases, communication training. Therefore, students receive basic skills preparation as part of their job experiences prior to teaching. A student from site I commented, "We are much better prepared than the academic people."

Work experience was mentioned by faculty and students from sites G, H, and I as beneficial for students to have in preparation to teach basic skills in a vocational classroom. Students

from site G listed personal experiences, workshops and conferences that allow students to transfer what they have learned to their classes as well as observation of teachers who can be emulated as good preparation for teaching basic skills. One student added that her classes in social work enabled her to acquire skills in interviewing and group leadership, which can be used in working within the vocational classroom.

Another student from site G described an inservice program that gave teachers and industry representatives an opportunity to change places with one another. As a result, she said, the teachers learned what is expected of entry-level workers who seek employment. This firsthand knowledge, according to this student, is transferable to the classroom in the preparation of students exiting the vocational program and entering business and industry.

Workshops, conferences, courses dealing with teaching the learning disabled student, and information concerning components of survival skills were cited by students from site G as experiences that they would like to have in preparing them to teach basic skills. One student also added that they are hampered as teachers by not having adequate background information about their vocational students to allow them to make suitable instructional decisions.

Special needs. Two special needs faculty members and six special needs students from site G provided information on the types of experiences external to their teacher education program that have prepared the vocational students to teach basic skills. One faculty member stated that inservice programs are preparing vocational teachers to provide instruction in basic skills. He went on to add that there is currently a program that allows teachers to return to business and industry to learn new skills that are helpful to them in the classroom.

One student stated that he learned survival skills as a worker on the job. Several students noted one class that concentrated on writing. One respondent said that imitating an elementary school teacher had helped him in teaching reading and writing and that he had gained math experience through his work as a draftsman. A student who had previously worked as a reporter and editor stated that this experience had been beneficial in developing oral communication skills. One student summarized his preparation to teach basic skills by commenting, "All of these things I do the way I was taught and the way I have used these skills myself in working before I started teaching."

F. What techniques are being used to train teachers to teach basic skills?

Thirty-six faculty members and 125 students responded to research question F. Respondents represented all nine of the

sites visited for data collection. Faculty and students interviewed were asked to identify techniques that are used to train vocational teacher education students to provide basic skills instruction. Technique is defined as "an instructional procedure designed to relate to the learner the material being presented in order to facilitate learning" (Good 1973; p. 591). The techniques frequently mentioned by students and faculty include the performance-based curriculum approach, contract learning, role playing, lectures, drills, field trips, and audiovisual presentations. Specifics on the techniques previously listed, as well as more unusual approaches, will be reviewed in the following portions of this discussion of research question F.

Agriculture; business and office. Five students from agriculture at one site responded to research question F, as did ten faculty members and forty-three students from the business and office service area. The business and office faculty and staff responding to the question represented six of the sites visited by project staff.

The agriculture students stated that "real-life" application of basic skills has been stressed within their vocational teacher education classes. The agriculture students and business and office students from sites G and I mentioned the use of visual aids as a technique frequently used within their classrooms and one that can be used by them to teach basic skills. Business and office faculty from sites D and F said that they have used contract learning with their vocational students as a means of negotiating level of performance.

Performance-based teacher education modules that stress the competency-based curriculum approach were mentioned by faculty from site D as tools used with their vocational students to train them to teach basic skills. Staff from this site also stated that they use materials from the Vocational-Technical Education Consortium of States (V-TECS) and show their students how to diagnose reading problems. Videotaping of presentations for evaluation purposes was a technique used by staff at site E. Variations of this technique were mentioned by students from sites G and D as they discussed how mock interviews and other role-playing situations are presented in their classes to train them to detect problem areas. Field trips, lectures, drill sessions, and individualized instruction were also mentioned by students from sites B, F, G, and I as techniques used by their instructors to train them to teach basic skills.

One business and office student who was currently teaching described the technique that she used to promote reading and comprehension. She used written instructions for class activities and said that "I give them an assignment sheet and when they ask me what it is, I say, 'Read it--it's on the paper, read it'."

Faculty and students were asked about the availability of materials and other resources to assist vocational teachers in providing basic skills instruction. Generally, the faculty commented that adequate materials are available but that they must be adapted in some manner to make them more relevant. One business and office faculty member from site F stated that the textbooks are written on an elementary level and can be insulting to students. Another faculty member at the same site said that although materials are available that deal with basic skills, it would be useful to have a single source that presented an approach to basic skills in vocational education methods that can be used to teach students and provide them with examples for their later use. A business and office instructor at site B had found current periodicals and vocational textbooks to be very adequate.

One business and office faculty member from site I discussed the problem that exists in identifying relevant basic skills materials. He said he has found that materials must be adapted, and suggested more needs to be done to develop materials to identify student competencies and aid teachers in individualizing instruction. Both business and office faculty members from site I concluded that time and money are required to enable teachers to make available materials more appropriate for teaching basic skills in vocational education.

Students from site D stated that they are not familiar with any resources that could be used to prepare them to teach basic skills but believe that this information will be available to them when they enter the public schools. Students from site E added that no help is given to prospective teachers in finding resources to instruct their students in basic skills.

Distributive education; health occupations. Four distributive education faculty members and ten students and one health occupations instructor and six students provided information in response to the research question. The distributive education respondents were from sites C, D, and I, and the health occupations respondents represented sites A and G.

One distributive education faculty member from site C used competency-based curriculum and contract learning as a technique to prepare students to teach basic skills. Another distributive education instructor from site I had a staff person from a materials lab at another university visit his class to discuss the selection of materials for classroom use that are appropriate for various reading levels. Distributive education students from site D stated that they are taught about available resources to help them teach basic skills in their teacher education classes.

The health occupations instructor representing site A said that she helped her student teachers solve problems encountered in school, and they then shared the problems and solutions with other student teachers. The problems concern the basic skills

of students as well as other areas. She uses two resources to train teacher education students to teach basic skills--What Color Is Your Parachute, by Richard N. Bolles, and Teaching Reading In The Secondary Schools Content Subjects, by Carl Smith.

Lastly, health occupations students from site G described a course assignment in which they developed a prescriptive lesson plan for a fast learner and a slow learner. This assignment helped to increase their awareness of the special considerations that must be made when working with pupils with various basic skills levels. The students also mentioned that they have had lectures from inservice teachers in vocational education on the subject of study skills and the proper way to relay this information to the students that they will be teaching.

Home economics. Nine home economics faculty members and twenty-seven students from six sites provided responses to research question F. Faculty from sites A, B, and F concluded that there are sufficient materials to use in preparing students to teach basic skills but that the materials must be adapted to be relevant to vocational education. One faculty member from site I stated that she used supplemental reading materials in the methods courses that she teaches to help her students understand that not every person reads at the same level. She added that more materials exist today to prepare teachers to work with students to improve their basic skills than were available several years ago. The materials that are now available are written on more than one level and allow vocational students to see how the same content can be adapted for students with various levels of performance.

Students from sites A, B, and C commented on techniques that have been used to train them to teach basic skills. The prospective teachers from site A said that they have learned about resources and referral agencies that can be used in helping their students with basic skills from their instructors. One student from site B described an educational media class that teaches students how to use media in basic skills instruction.

One student from site C pointed out a problem that can exist by stating that "They teach us techniques but they don't teach us what to do if a technique doesn't work. They don't help us integrate how to teach with the students themselves."

Industrial arts. Respondents from the industrial arts vocational service area consisted of six faculty members from four sites and fourteen students from five sites. Students from site C stated that giving tests orally for slow readers is a technique that they are aware of and that several of them have used. Site H students added that teachers must find something that the student is interested in and the technique is to use that interest to motivate the student to improve in basic skills.

Faculty from sites C and F noted that materials are available that can be used to train teachers to provide instruction in basic skills. However, staff from site C indicated that the materials must be collected from numerous content areas and do not include all of the information needed to teach survival skills. One faculty member from site I said that although finding adequate materials is not a great problem, the textbooks, workbooks, and guides that are used (especially at the junior high level) are often at a fairly low level in reading and math.

Trade and industry; special needs. Four trade and industry faculty members and fourteen students from three sites responded to research question F. The trade and industry faculty members commented that they have found sufficient materials available to train students to teach basic skills. One faculty member added that specialists in the schools provide teachers with materials that they can use with students in their own vocational content areas.

Two special needs faculty members and six students from site G responded to the research question. The students interviewed responded that their faculty members had presented them with information about techniques that can be used to teach basic skills to their vocational students. The two faculty members described an individual assignment that students are given in which they must plan a lesson. The students first identify the reading level of their target audience and direct their lesson plans to that audience. The faculty members added that they have found a sufficient number of books and audiovisual materials to use as resources to help them prepare students to teach basic skills.

G. Which basic skill areas do vocational teacher education programs seem most interested in training their teachers to teach?

Across all the service areas and all the sites visited, the oral communication basic skill area was mentioned most often by both faculty and students in responses to questions in this area. (See table 4 for a display of all responses. Respondents at the same site were encouraged to reach their own conclusions and were not encouraged to reach concensus. This explains why table 4 lists oral communication as both the most and least emphasized basic skill cited by distributive education students at site D.) Survival skills were mentioned next, with students providing this response more often than faculty members. The other three basic skill areas were mentioned less often by both faculty and students, with writing mentioned third, reading fourth, and math fifth.

Responses by vocational service area follow.

Agriculture. Faculty members from the one site that had an agricultural education program indicated that oral communication

TABLE 4

BASIC SKILL AREAS THAT VOCATIONAL
TEACHER EDUCATION PROGRAMS SEEM MOST AND LEAST INTERESTED
IN TRAINING THEIR TEACHERS TO TEACH BY VOCATIONAL SERVICE AREA

		Most		Least	
Vocational Service Area	Site	Faculty	Students	Faculty	Students
Agriculture	H	Oral Communication	Oral Communication Survival Skills	Survival Skills	Reading
Business and Office	B	Reading Writing Math Oral Communication	Writing Oral Communication Math	Survival Skills Math	Reading Survival Skills
	D	Writing Oral Communication	Writing Reading Math Survival Skills Oral Communication	Survival Skills	Survival Skills Math Writing
	E	Reading Writing			
	F	Survival Skills Writing Reading Oral Communication	Oral Communication Writing	Math	Math Survival Skills
	G		Oral Communication Writing	Reading	Survival Skills
	H	Oral Communication	Writing	Math	Math

TABLE 4 (continued)

Vocational Service Area	Site	Most		Least	
		Faculty	Students	Faculty	Students
Business and Office (continued)	I	Writing Survival Skills Math Oral Communication Reading	Math Survival Skills Oral Communication Writing		Reading
Distributive Education	C	Survival Skills	Oral Communication Survival Skills		Math
	D	Math Writing Oral Communication	Math Oral Communication Reading Writing		Writing Oral Communication
	I	Oral Communication Survival Skills Writing	Survival Skills Reading Writing	Math	Writing Math
Health Occupations	A	Writing Oral Communication	Survival Skills Oral Communication		Math
	G		Survival Skills Reading Writing Math		Math

TABLE 4 (continued)

Vocational Service Area	Site	Most		Least	
		Faculty	Students	Faculty	Students
Home Economics	A	All important	Writing Oral Communication Survival Skills Reading		Math
	B	Survival Skills Oral Communication Writing	Survival Skills Oral Communication	Math Reading	Writing
	C	Survival Skills Oral Communication	Survival Skills Reading		Reading Math
	E	Oral Communication	Survival Skills Oral Communication Reading	Math	Math
	F	A balance	Survival Skills Oral Communication	Math	Math
	H		Survival Skills Oral Communication		Math Writing
	I	Reading Survival Skills	Survival Skills	Math Oral Communication Writing	Math Writing

TABLE 4 (continued)

Vocational Service Area	Site	Most		Least	
		Faculty	Students	Faculty	Students
Industrial Arts	C	Survival Skills Oral Communication	Survival Skills Reading Oral Communication	Reading	Writing Math Oral Communication
	E	Survival Skills	Oral Communication	Reading	Math
	F	Oral Communication	Writing Reading Oral Communication Survival Skills		Math Writing
	H	Oral Communication	Survival Skills	Survival Skills	Writing
	I	Survival Skills Math Oral Communication	Survival Skills Oral Communication	Reading Writing	Writing Reading Survival Skills
Trade and Industry	D	Oral Communication	Oral Communication Reading Writing	Math Reading	Math
	G	Math			Math Survival Skills

TABLE 4 (continued)

Vocational Service Area	Site	Most		Least	
		Faculty	Students	Faculty	Students
Trade and Industry (continued)	H	Oral Communication	Oral Communication Writing Reading	Writing	
	I	Math Survival Skills	Oral Communication	Writing Oral Communication	Math Reading
Special Needs	G	Oral Communication	Oral Communication	Math	Math Reading

was the basic skill area that was most important in their program. Students, as well, indicated that oral communication was important and added that they viewed survival skills as an area that was included in their training to teach.

Business and office. Faculty responses from seven sites indicated that writing and oral communication were the two basic skill areas most stressed. Student responses put writing first, with oral communication a very close second. Reading and math came next, with faculty responses indicating more emphasis on reading than student responses had. Survival skills were least often mentioned.

Distributive education. From three sites, writing, oral communication, and survival skills were tied as the basic skills areas most often mentioned as those vocational educators seemed most interested in training their students to teach. Both students and faculty mentioned math, but only students mentioned reading as a high-emphasis area.

Health occupations. From two sites, responses were scattered across all five of the basic skill areas. Faculty mentioned only writing and oral communication. Students indicated that interest was shown in all five of the basic skill areas.

Home economics. From seven sites, faculty and students indicated that most interest occurred in survival skills and oral communication. Reading was next, with writing fourth and math fifth. Faculty at one site indicated that it "would probably be a balance." At another site, one faculty member stated, "I can't compare the importance of the areas because they are all important." A student at one site said, "Reading is stressed in methods courses, but in our other classes there's nothing." At another site, a student stated that survival skills were most stressed because "that is essentially what home economics and consumer education are."

Industrial arts. From five sites, oral communication was mentioned most often by both faculty and students, with survival skills a close second in the number of mentions. Math was mentioned only by faculty, and reading and writing were mentioned only by students.

Trade and industry. In responses from four sites, oral communication was the basic skill area that both faculty and students cited most often as the one their program seemed most interested in training their teachers to teach. Faculty also mentioned math and survival skills; students mentioned reading and writing. Students at one site said that the emphasis is on teacher survival skills, not on assisting secondary students with basic skills problems.

Special needs. Responding from one site, both faculty and students agreed that emphasis was on oral communications. Other basic skills were not mentioned, although faculty pointed out that "it depends on the occupational area and what area the teachers are teaching."

H. Which basic skill areas do vocational teacher education programs seem least interested in training their teachers to teach?

Across all the service areas and all the sites visited, math was mentioned most often by both faculty and students in responses to questions about the basic skill area least emphasized by the vocational teacher education programs. (See table 4 for a display of all the responses.) The other four basic skill areas were mentioned less often by both faculty and students, with writing having the second number of mentions, reading third, survival skills fourth, and oral communication fifth.

Responses by vocational service areas follow.

Agriculture. Responding from one site, faculty indicated that survival skills was the basic skill area least emphasized; students indicated that they felt that reading was the least emphasized.

Business and office. In responses from six sites, survival skills and math were the two basic skill areas mentioned most often by both students and faculty as being least emphasized. One faculty member said, "Survival skills would be the least emphasized. It's just something that we do not teach much. I think that in college, we just don't push it like we should, as far as survival. I think we think more of skills in our area. We teach more toward skills, especially in business education."

Reading was the next basic skill area most often mentioned. One student said that "the required content reading course was the only course we had in helping us teach reading. The course was for everyone in education and was not specialized to vocational education."

Only writing was mentioned by students as an area with least emphasis. Neither faculty nor students mentioned oral communication.

Distributive education. In responses from three sites, math was the only area of least emphasis mentioned by faculty. The students mentioned, along with math, writing and oral communication.

Health occupations. From two sites, only students responded to questions about areas of least emphasis. Students at both sites agreed that the area of least emphasis was math.

Home economics. Responding from seven sites, faculty and students agreed that math is the least emphasized basic skill area. Students at one site indicated that math is not needed much in home economics. However, students at three sites felt differently. They indicated that math is not stressed as much as it should be. They felt that home economics involves a lot of math (budgeting, measuring, etc.) and that they know how to use that math, but they have not been trained to help students whose math skills are poor.

Reading, writing, and oral communication were mentioned by faculty as areas where least emphasis is placed. Students mentioned reading and writing. Neither students nor faculty mentioned survival skills as an area of low emphasis.

One faculty member's response to a question in this area follows: "Math is the least emphasized. Oral communication is kind of in between. I think we're weak on the area of having our students be able to identify oral communication problems with their students and then knowing what to do about it. Writing is part of the reading, but I think we're probably weak in helping students really identify, and, once they have identified, then know how to go about doing something about it."

Industrial arts. Responding from five sites, faculty indicated that reading was the basic skills area least emphasized. Writing and survival skills were also mentioned. One faculty member said, "We probably do the poorest job in the reading and writing for the most part because the other things are so required to do anything at all."

Students felt that writing was the basic skill area least emphasized, with math being mentioned next most often. The other three basic skill areas (reading, oral communication, and survival skills) were all mentioned once as areas of least emphasis. One student summarized his response this way: "Industrial arts has been a dumping ground . . . It may not be in the future, but that is the way it has been . . . You usually get students that have trouble with their writing and reading and math . . . [Those] are probably the areas least emphasized."

Trade and industry. Responding from four sites, faculty indicated that the least emphasis was on reading and writing. Oral communication and math were also mentioned as areas of least emphasis. One faculty member stated that the only place students are prepared in oral and written communication is in their college English classes. Survival skills were not mentioned by faculty as a basic skill area least emphasized.

Students felt that math was the basic skill area least emphasized. One student indicated that remedial reading was not emphasized, diagnosis of basic skills was not emphasized, and teaching methods were not emphasized.

Special needs. Responding from one site, faculty and students indicated that math was the basic skill area least emphasized. Students also indicated that reading was not emphasized.

I. How have vocational teacher educators acquired the capability to train teachers to teach basic skills?

Responses regarding this question centered around five areas: (1) undergraduate and graduate preparation, (2) previous employment experience, (3) secondary school experience, (4) professional development, and (5) interaction with colleagues.

Those faculty who indicated that they had learned to train teachers to assist with basic skills development through their undergraduate and graduate preparation were those who had been through these experiences most recently. Several of the faculty who are long-term faculty members mentioned that these topics (basic skills) had not been a part of their preparation as teacher educators.

Faculty in business and office, distributive education, health occupations, home economics, and trade and industry mentioned previous employment experience as helpful in acquiring the capability to assist in basic skills preparation. Secondary school experience (teaching, teaching in inner city schools, assisting student teachers, feedback from former students, feedback from cooperating teachers) was widely mentioned.

A variety of professional development experiences was mentioned. These experiences included professional organizations, statewide workshops (both participant and trainer), meetings on materials development, reviewing curriculum materials, college-wide workshops, university staff training, research studies in the literature, and personal and professional reading.

One faculty member credited her twenty-two years of work with colleagues at the university as preparation to teach how to improve secondary students' basic skills. Work with the special education department was mentioned by three faculty. Referrals and consultation with colleagues were also mentioned.

Two faculty members mentioned using "trial and error" in training their undergraduates to assist with basic skills instruction. Another faculty member said, "I'm not sure anybody has a real handle on teaching reading, or math, or English. When it comes right down to it, if a sure-fire method existed, there wouldn't be so many students who can't read or write."

Specific responses by vocational service area follow.

Agriculture. No responses to this question were obtained from agriculture faculty.

Business and office. Three faculty members responded to a question concerning how they acquired the capability to train teachers to assist with basic skills instruction. Experiences mentioned included courses in graduate and undergraduate school, work experience, high school teaching, and professional organizations, both in education and in the community.

Distributive education. Three distributive education faculty mentioned business experience and workshops as ways that they had acquired the capability to train teachers to assist with basic skills instruction. One person mentioned that he volunteered to be a trainer for statewide workshops in order to gain experience. One person mentioned that, in addition to the formal program at workshops, he gained ideas from the other participants. One person specified that he had not been prepared through the teacher education program.

Health occupations. One health occupations faculty member indicated that her preparation for training teachers to teach basic skills came from her on-the-job training as a health care professional.

Home economics. Five home economics faculty responded to the question about how they acquired the capability to train teachers to assist in basic skills instruction. One person mentioned work in her doctoral program. One person mentioned that basic skills themselves were part of her formal education, but how to assist students in improving basic skills was not. Two persons mentioned previous employment experience as beneficial preparation for teaching basic skills. One person specifically mentioned the usefulness of employment experience in teaching survival skills. Specific employment experiences mentioned were work with incarcerated youth and job corps/job training programs.

Secondary school experiences mentioned included teaching in inner city schools, feedback from former students, and helping student teachers in the field with their problems. Professional development experiences mentioned included major meetings for materials development, reviewing curriculum materials, and an assortment of workshops and meetings. One person mentioned collegewide workshops in the area of reading.

One person pointed out that she drew on twenty-two years of work with colleagues at the university. Two people mentioned using "trial and error" in training their undergraduates to assist with basic skills instruction.

Industrial arts. No responses to questions in this area were obtained from industrial arts faculty.

Trade and industry. Responses from four trade and industry faculty indicated that they acquired the capability to train

teachers to teach basic skills through their graduate and undergraduate programs, through previous employment experience, and through professional development. Two of these faculty indicated that skills in the area of math and survival skills came through previous employment experience in the trades. Workshops and staff training at the university were mentioned, along with personal and professional reading.

Special needs. Three special needs faculty members provided responses to questions about how they acquired the capability to train teachers to teach basic skills. Undergraduate and graduate work in teaching reading was mentioned. Teaching experience and supervising student teachers at the secondary level were indicated. Participation in workshops was mentioned. Interaction with the special education department was found helpful. One person mentioned that "we recognize our limitations, then look for somebody else to provide them more information. We know who to refer them to."

J. Do preservice/inservice vocational education teachers think they have a responsibility to improve their students' basic skills?

All 165 teacher education students interviewed were asked questions that reflected this research question. In general, the preponderance of responses was affirmative, regardless of whether the responses were analyzed by site or by occupational service area across sites. Clearly, more of the teacher education students interviewed think vocational teachers are responsible for improving their secondary students' basic skills than think otherwise.

The teacher education students who answered affirmatively often said that others also bear responsibility for improving students' basic skills. Those they cited as sharing responsibility were other secondary school professionals (such as academic teachers, counselors, specialists, and administrators), the secondary students themselves, and the students' parents.

Several teacher education students who said they think vocational teachers are responsible for basic skills indicated that that responsibility may extend only to a limited number of basic skills areas and only to limited steps the vocational teacher is responsible for taking in order to improve a student's skills. The basic skill areas for which these teacher education students believed vocational teachers were responsible were survival skills and oral communication. The steps to be taken to improve secondary students' basic skills were identification of students with basic skill problems and the referral of such students to other teachers or specialists who can help them.

At only one site (site G) did negative responses considerably outnumber positive responses on the question of vocational

teachers' responsibility for basic skills. The teacher education students who responded that secondary vocational teachers are not responsible explained their answers by citing the following reasons: (1) time constraints; (2) class entry prerequisites that should guarantee that students already have good basic skills; (3) the responsibility of elementary and junior high school teachers for basic skills; (4) the availability of specialists to help students whose basic skills are inadequate; and (5) the possibility of offending secondary academic teachers by teaching basic skills such as writing and math.

The few teacher education students at this site (G) who responded affirmatively explained their answers by saying that all secondary teachers, including vocational teachers, are responsible for improving their students' basic skills. One such respondent said that all teachers should be qualified to do so because they themselves actually use all the basic skills.

In only one occupational service area (special needs) did the negative responses to the question of responsibility considerably outnumber the positive responses. Considering this area's focus (special needs students, who often have difficulty with basic skills), the preponderance of negative reactions to the question of responsibility was surprising to project staff. The reasons these teacher education students gave for their negative and positive responses were similar to those cited earlier in this section and are not repeated here.

A report of responses to research question K from teacher education students, grouped by service area, appears below. (The special needs area is not included, since findings from that area appear above.)

Agriculture. Five agriculture students at only one site (H) were interviewed. The responses of these students were fairly evenly split on the question of responsibility. One of those who responded in the affirmative thought that the responsibility extended only to improving secondary students' oral communication and survival skills "because they are an integral part of the [vocational] program." Another student responded that "if somebody can't read in the eleventh grade, it is the fault of English and reading teachers along the way. They just didn't do their job. But it's not my responsibility."

Business and office. Forty-nine of these students were interviewed at seven sites (B, D, E, F, G, H, and I). Their responses were much more often positive than negative. As one student at site I put it, "You have to be striving all the time to help anyone who's deficient in any area." However, some students who responded positively also pointed out that vocational teachers are not the only professionals who are responsible for basic skills, and some also said that they expected to teach in secondary schools that had specialists who should be able to help students who have basic skills problems.

Distributive education. The responses from the fifteen distributive education students interviewed at three sites (C, D, and I) were more uniformly positive than the responses to this question from any other occupational service area. One student explained her response by saying, "Teachers who want to teach only the strict content of their course fail their students." Another offered that vocational teachers "should find ways to use methods that involve improving reading skills, math skills, etc." The time that improving basic skills may involve did not seem to bother these students. "It may take a lot of time," said one, "but a teacher doesn't work 8 to 5." According to another, "You have to care and look out for what the students' needs are. If it messes up your lesson plan, oh well, just do tomorrow what you were doing today."

Health occupations. The responses of these teacher education students (fourteen interviewed at sites A and G) were evenly split on the question of responsibility. Those who responded negatively cited course prerequisites that should guarantee that their students will have good basic skills as the reason for their responses. Some students who responded positively said that the vocational teacher's responsibility for basic skills extended only to improving their students' oral communication and survival skills.

Home economics. The responses from home economics students (thirty-six interviewed at sites A, B, C, E, F, H, and I) were mostly positive. "If you acknowledge that a student has a problem," one student at site F explained, "then you have the responsibility to do something about it. If you care enough about your students you're going to do your best to make sure each is up to grade level." Another student at site F said, "I get tired of seeing students just passed on. Some teachers just don't want to take the time to correct the problem. They let the next teacher worry about it. Somebody's got to stop."

One student at site B said that she thought home economics teachers have a better opportunity to help students with problems in basic skills because, she said, teaching in this area is relatively individualized.

A student at site F, who said that vocational education teachers are not responsible for basic skills, said, "I don't think it's fair to the student to try to help them in areas in which we are not educated."

Another student at that same site said that if vocational teachers teach basic skills, academic teachers may interpret it as a statement that they are not doing a good job. "It could cause resentment," according to this student, who responded negatively.

Industrial arts. Twenty-six industrial arts students were interviewed at sites C, E, F, H, and I. Their responses were predominantly positive. Although some students explained their negative responses by saying that there is just not enough time to help a few students who need it in a class of twenty-five, a student at site F said, "That's what teaching is all about--teaching those kids."

Another student, at site H, said that vocational teachers' responsibility for teaching basic skills amounts to only pointing out how important basic skills are to success in industrial arts. "That's where my responsibility ends," he said. In addition, he said he "will not help a child who doesn't want help. That would do more harm than good."

Trade and industry. Responses from fourteen teacher education students interviewed at sites D, G, and I were fairly evenly split. Students who answered negatively cited time constraints, their belief that other teachers are responsible, and the availability of specialists to help with basic skills as reasons for their responses. One student who answered in the affirmative explained the response by saying ". . . if they [secondary students] have these problems, who else is going to take care of them except the teacher?"

K. Do vocational teacher educators think they have a responsibility to train their students to teach basic skills?

Forty-five faculty members were asked to respond to interview questions that reflected this research question. Their responses can be placed in three categories: (1) vocational teacher educators, among other professionals, have this responsibility; (2) vocational teacher educators are responsible for teaching very limited aspects of how to improve secondary students' basic skills; and (3) vocational teacher educators are not responsible for teaching our students how to improve the basic skills of secondary students.

As might be expected, the faculty members' responses generally seemed to coincide with whether they believed the teachers they are preparing would actually be responsible for improving their secondary students' basic skills.

At three of the sites (sites A, B, and C), all of the faculty members, regardless of occupational service area, responded that vocational teacher educators should prepare their students in the basic skills areas. In addition, they nearly always listed secondary school professionals other than vocational teachers whom they believe must also have a role in improving secondary school students' basic skills. The professionals they cited were academic teachers, counselors, administrators, and reading specialists. In citing these other professionals, the faculty members indicated that improving students' basic skills must be a

team effort and that the secondary vocational teacher is only one part of that team. The implication clearly was that educators who prepare these other professionals also bear responsibility to teach their students how to improve secondary students' basic skills.

All faculty members interviewed at site H were also in agreement with one another. However, they said they were responsible for teaching their students only limited aspects of how to improve secondary students' basic skills: (1) how to identify students who have problems with basic skills and (2) how to motivate students to improve their basic skills. Their responses, they said, reflected the fact that their state's secondary schools operate in countywide systems. For that reason, they said, they believed that the teachers they are preparing are very likely to have access to specialists to whom they can refer students with basic skills problems.

Faculty members at each of the other five sites (sites, D, E, F, G, and I) were not in total agreement about their responsibility to prepare their students in the basic skill areas. Across these sites, however, most faculty members who taught distributive education, health occupations, and home economics education generally responded that they felt a responsibility to teach their students how to improve the basic skills of their secondary students. The responses that vocational educators are not responsible for this task came most often from faculty members who taught industrial arts education.

A report of responses related to research question K from all faculty members, grouped by occupational service areas, follows.

Agriculture. Only one agricultural education faculty member was interviewed and that was at site H. Agreeing with his colleagues at that site, this faculty member said that he thought vocational teacher educators are responsible for teaching only two aspects related to basic skills. They should, he said, teach their students how to identify secondary students with basic skills problems and how to motivate secondary students to improve their basic skills.

Business and office. Twelve faculty members who taught this occupational service area were interviewed at six sites (sites B, E, F, H, and I). These faculty members, with the exception of the five at sites F and H, generally responded by saying that they believed that vocational educators are responsible for preparing their students to improve secondary students' basic skills. They seemed to expect that the teachers they train will have some secondary students whose basic skills are inadequate and that teachers should be prepared to help those students.

As a business and office education teacher at site I put it, "When a vocational teacher realizes that secondary students do not have the necessary basic skills to do the work in the vocational class, he/she knows that they'll have to give them remedial help. The teachers take the responsibility of trying to teach what they feel the kids must have."

The faculty members in this service area at site H agreed with their colleagues at the site in that they thought vocational teacher educators' only responsibility regarding basic skills is to teach how to identify students with problems and how to motivate students to improve their basic skills.

The business and office education faculty members at site F said they did not feel responsible for preparing their students to improve secondary students' basic skills unless, perhaps, it would be to teach them how to identify those students with basic skills problems. Their responses seemed to stem from a belief that secondary vocational teachers should not be required to improve their students' basic skills because "there's only so much content you can put into one course." They seemed to feel that students with basic skills problems should not be in the vocational class at all or at least should leave the class for remedial help. "Wouldn't it be more of a contribution," one faculty member asked, "to send a child who has a reading problem to a reading specialist so that the teacher can have fifty minutes of class time to proceed with the subject matter, rather than work with that child and rob thirty-four others of fifteen or twenty minutes?"

Distributive education. The four distributive education teachers interviewed at sites C and D indicated that they think vocational teacher educators are responsible for preparing their students in the area of basic skills. However, the faculty member at site I said that the responsibility extends only to teaching how to recognize students with basic skills problems and where to go to get help. "There is so much to do in methods alone," that faculty member lamented. "To get into all these other things is almost impossible."

Health occupations. Only one health occupations faculty member addressed this question; she was from site A. Her response indicated that she believes vocational teacher educators are responsible for teaching their students how to improve their secondary students' basic skills. She indicated that her belief is predicated on her opinion that every person on the faculty and staff of a secondary school is responsible for improving the students' basic skills.

Home economics. All nine home economics faculty interviewed at six sites said that vocational teacher educators are responsible for preparing their students in the basic skills areas. One educator at site I explained her response by stating that if

secondary students don't have good basic skills, "much of what the vocational teacher is trying to teach is lost. If the student doesn't have good basic skills, the teacher has to assume the responsibility for dealing with that."

Another educator, at site B, talked about students she's known who don't want to be graded on anything other than their vocational skills in the vocational class. She said teachers should not be intimidated by this and should respond "Just because you're outside English class, you don't speak it? Because you're not in math class, you don't add and subtract?"

Another home economics teacher at site B commented that it doesn't take much time to teach basic skills in home economics class.

Industrial arts. More frequent and stronger negative responses to research question K came from faculty members who teach these areas than from those in any other single occupational service area. Seven of these faculty members were interviewed, at five sites (sites C, E, F, H, and I).

A faculty member at site E responded, "I feel we have to draw the line somewhere [in what and how much we teach]. I wish I didn't have to take the time [on basic skills]. I kind of resent it."

The two faculty members at site F think that students with basic skills problems should not be in the vocational classroom. "Maybe we should put our foot down," one said, "and say we are not going to be used as a dumping ground any longer."

Some other faculty members in these areas disagreed. As one at site I said, "Our first allegiance ought to be to the students and their welfare, rather than to our subject matter." Another from that site said that vocational educators at any level have the right and responsibility to reinforce what goes on in other areas of the school. "We are educators," he said, "and the subject matter we're proficient in happens to be industrial arts. But our eyes have to be open to the rest of what constitutes an education."

Trade and industry. All but one of the seven faculty members in this area, who were interviewed at four sites (sites D, G, H, and I), responded affirmatively to research question K. The faculty respondent (at site D) who was the exception asked, "Why should the vocational education teacher be responsible for learning his trade and the other person's, too?"

The trade and industrial education faculty members at site H agreed with their colleagues at that site that vocational educators are responsible only for teaching how to identify secondary students with basic skills problems and how to motivate students to improve their basic skills.

Another faculty respondent, at site I, cautioned that vocational educators should not become academic teachers.

Special needs. Two faculty members in the area of special needs were interviewed at site G. Considering her special needs orientation, the responses of one faculty member were surprising to project staff. This faculty member said that the responsibility for improving basic skills does not rest with vocational educators, but with academic teachers "from the first grade on." This faculty member seemed to think it futile to prepare vocational teachers to help their secondary students in at least two basic skills areas: "If students haven't learned to read and write by the eleventh grade, they're not going to do it."

The other teacher suggested that survival skills are within the province of vocational education and that in order to succeed at teaching those, the vocational teacher will also have to teach reading, writing, and oral communication.

Implications for Further Study

While the findings of a limited, exploratory study such as this cannot be considered definitive, they do offer guidance for additional research that should be conducted about the relationship between vocational teachers and basic skills instruction. Worthwhile, researchable questions that deserve further study are listed below.

1. Would a national, representative study confirm the findings of this exploratory study? Would a national study find that more vocational teacher education programs included required work in the area of basic skills? In the information that was gathered for this study, it was apparent that when there were no requirements for providing instruction to prepare vocational teachers to assist their students with basic skill problems, faculty (even within the same site) paid lesser or greater amounts of attention to this area, depending on their own interests and background.

2. Is having good basic skills oneself sufficient preparation for improving secondary school students' basic skills? Many of the teacher education students and their faculty expressed such a belief. However, many of the teacher education faculty expressed concern about the level of basic skills competence of the teacher education students and discussed the possibility of raising the entrance requirements for vocational teacher education programs. Would such raised entrance requirements exclude many potentially good teachers who need some remedial work in reading, writing, oral communication, math, or survival skills?

3. Can the vocational teacher education students demonstrate the competencies needed to assist secondary students with basic skills problems? The responses in this self-report study indicate that vocational teacher education students believe (for the most part) that they could assist secondary students with basic skills problems. Would an observational study in actual classroom settings show that belief to be justified?

4. How aware of the complexity of the task of assisting students with basic skills problems are vocational teacher educators and vocational teacher education students? For the most part, faculty members seemed aware that some teacher education students needed assistance in basic skills. However, they seemed content to leave such assistance to other courses and programs at the universities. Perhaps this reflects their feeling that it is other information and skills that they need to provide to the students, or perhaps it reflects their awareness that they are not prepared to assist with these problems. Frequent references to referral to specialists and consultations with teachers in the basic skill areas by both faculty and students may indicate some awareness of the complexities involved in assisting with basic skills problems.

5. How different would the responses of vocational teacher education students be after two years of secondary classroom experience? Several of the students indicated that they were concerned about whether they would continue to feel the responsibility for assisting with basic skills problems after they had been teaching awhile. They cited the teacher "burn out" phenomenon that they had observed among teachers they had known.

6. Is the concern about whether vocational teachers would have enough time to assist their students with basic skills problems a valid concern? Halasz and McCaslin (1982), in an exploratory time-on-task study of ten secondary vocational education classes in three program areas (agriculture, distributive education, and trade and industry), found that 6.7 percent of classroom time was spent on basic skills, with an additional 8 percent of time spent on employability skills (analogous to survival skills). Thus nearly 15 percent of classroom time was being spent in the basic skills areas. In addition, Halasz and McCaslin found that 31 percent of the classroom time was being spent "off task." That is, the time was not being spent on basic skills, technical skills, employability skills, set up/clean up, or related "on task" activities. If these findings hold true, perhaps time is available for basic skills assistance in regular vocational classes.

7. Are oral communication and survival skills the most important basic skills in vocational education? The findings from this study indicate that faculty and teacher education students believe they are. Are these indeed the areas in which secondary vocational students must be proficient when they complete their vocational education programs and enter the job market?

8. Do math skills need more emphasis in vocational teacher education programs? Many of the students in all of the service areas cited examples of how math was used in the vocational programs they will be certified to teach. However, there was universal agreement that math was the basic skills area least emphasized in their teacher education programs. Should (and can) more emphasis be placed on improving basic skills in math in teacher education programs?

9. Which basic skills problems surface most often in the secondary students enrolled in the various service area programs in vocational education? Although beyond the scope of this study, answers to this question would be extremely useful to vocational teacher educators in the planning, development, and delivery of teacher preparation.

10. What materials on how to teach basic skills are available nationally for vocational teacher educators to use with their students? Faculty responses in this study indicated that many faculty members had found sufficient materials to prepare their students to assist with basic skills. However, it must be remembered that nearly all the faculty were giving very little instruction on how to teach basic skills. The question remains about whether sufficient materials exist to prepare vocational teachers.

11. Will the National Center's Performance-Based Teacher Education modules for assisting students with basic skills problems have an impact on teacher education programs? These PBTE modules, designed to prepare vocational and technical teachers to assist students in developing and reinforcing their basic skills, will be generally available in 1983. Will the availability of such field-tested, self-contained materials make a difference in the emphasis on basic skills in vocational teacher education programs? Experimental studies could be conducted to determine whether teacher competencies are better improved through the use of the PBTE modules, through the use of other materials, or through the programs that are now in place.

12. Why, when both faculty and students indicate that they feel responsible for assisting secondary students with basic skills problems, is so little preparation being provided in vocational teacher education programs? A number of clues to the answer to this question came from the responses obtained in this study. It may be that too many other requirements (for majors, for graduation) stand in the way of providing the preparation. It may be a lack of interest. It may be that it is felt that no formal instruction is needed, that having good personal basic skills is all that a teacher needs to provide assistance with basic skills problems. It may be that sufficient materials are lacking. More information is needed to answer this question.

13. Where is the right place to teach basic skills? As some responses in this study indicated, it may be that basic skills should only be taught in the elementary and junior high schools and in academic secondary classrooms. However, many more responses indicated that in vocational education classes, secondary students could better understand the need for basic skills in order to perform in the "real world" of employment. If that is the case, vocational education teachers need to be prepared to assist in basic skills instruction. It may be that elementary and junior high teachers need assistance from vocational education in order to help motivate students to learn the basic skills they will need in order to assume their adult roles. More information is needed in order to determine the appropriate placement of basic skills instruction.

APPENDIX A

VOCATIONAL TEACHER COMPETENCIES:

ASSISTING STUDENTS IN IMPROVING THEIR BASIC SKILLS

85 competencies

5 proposed PBTE modules

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Following is a list of teacher competencies identified as being important for assisting students in improving their basic skills. The competency-identification process included the following major steps:

1. A group of nine national leaders with expertise in assisting students in improving their basic skills (vocational teachers, supervisors, and other experts) was identified and convened in January 1981. The group served as a DACUM committee, and under the leadership of a DACUM coordinator, the committee identified the teacher competencies needed to assist students in improving their basic skills. The DACUM (Developing a Curriculum) approach uses modified small-group brainstorming and consensus techniques to produce a chart of competencies. A total of 80 competencies in five functional areas was identified.

2. The 80 competency statements were refined and combined where necessary to eliminate overlap. In some cases, competencies deemed important in one functional area were added to other functional areas for consistency. This process yielded a total of 85 competencies. These were reclustered and sequenced into five functional areas, each of which will be developed into a single PBTE module.

The competency statements presented here may be useful for a wide variety of teacher training purposes. They are also designed to fit the needs of a national curriculum development effort in vocational teacher education. As such, they are consistent with, and augment, the 384 performance elements that form the development base of the 100 PBTE modules in the National Center's Professional Teacher Education Module Series.

Assist Students in Improving Their Reading Skills

1. Accept your responsibility in the provision of reading instruction.
2. Identify the reading skills required for entry into the trade/vocation.
3. Assess students' reading abilities.
4. Diagnose students' reading problems and reading levels.
5. Use care in interpreting existing student records.
6. Identify available instructional materials written at the appropriate reading level.
7. Use appropriate support personnel and materials.
8. Demonstrate a positive attitude toward reading.
9. Create a classroom environment conducive to reading.
10. Provide incentives to encourage student improvement.
11. Use students' special vocational interests to motivate them to read.
12. Teach appropriate technical and related vocabulary.
13. Demonstrate practical reading tips (e.g., skimming, pointing, underlining).
14. Develop students' ability to follow written instructions (e.g., have students read instructions and perform a specific series of hands-on activities).
15. Individualize reading instruction (e.g., through the use of modules).
16. Use small groups/pairings for reading activities.
17. Use reading games (e.g., crossword puzzles, scramble, word search).
18. Use audiovisual techniques (e.g., audiotape reading assignments).
19. Assist students in using self-evaluation techniques to determine their reading comprehension.
20. Provide opportunities for practice and reinforcement of reading.

Assist Students in Improving Their Writing Skills

21. Accept your responsibility in the provision of writing instruction.

22. Identify the writing skills required for entry into the trade/vocation.

23. Assess students' writing abilities.

24. Diagnose students' writing problems (spelling, clarity, punctuation, grammar).

25. Provide standards for written materials (spelling, clarity, punctuation, grammar).

26. Provide model formats for written materials (memos, reports, business letters, work orders).

27. Provide vocationally related writing assignments.

28. Assign writing topics related to students' special vocational interests.

29. Encourage student use of appropriate technical and related vocabulary.

30. Individualize writing instruction.

31. Use writing games (e.g., paragraph scrambles).

32. Provide opportunities for students to critique writing samples.

33. Assist students in using self-evaluation techniques to determine their writing ability.

34. Correct students' writing errors (spelling, clarity, punctuation, grammar).

Assist Students in Improving Their Oral Communication Skills

35. Accept your responsibility in the provision of oral communication instruction.

36. Identify the oral communication skills required for entry into the trade/vocation.

37. Assess students' oral communciation skills (speaking and listening).

38. Diagnose students' oral communication problems (e.g., grammar, pronunciation, clarity).

39. Teach appropriate technical and related vocabulary.

40. Encourage student use of appropriate technical and related vocabulary.

41. Correct students' errors in speech (e.g., focusing on one or two errors at a time).

42. Develop students' awareness of body language (nonverbal communication).

43. Use oral questioning techniques.

44. Ask students to repeat written and oral instructions to ensure their understanding.

45. Use role-playing techniques to improve oral communication.

46. Use oral cummunication games (e.g., rumor, one-way communication).

47. Have students give small- and large-group oral presentations.

48. Provide opportunities for students to practice their listening skills.

49. Teach techniques for using the telephone effectively.

50. Provide simulated and real-life opportunities for telephone use.

51. Assist students in using media to evaluate their own performance and progress.

52. Use guest speakers to stimulate student discussion.

53. Encourage students to take advantage of the opportunities for communication available through participation in student vocational organizations.

Assist Students in Improving Their Math Skills

54. Accept your responsibility in the provision of math instruction.

55. Identify the math skills required for entry into the trade/vocation.

56. Identify the math skills required to succeed in the vocational program.

57. Assess students' math skills.

58. Diagnose students' math deficiencies (e.g., inability to add and subtract).

59. Assess the appropriateness of math-related explanations in your instructional materials.

60. Identify available math-related materials appropriate to students' abilities and your vocational area.

61. Use appropriate support personnel and materials.

62. Teach appropriate technical and related math vocabulary.

63. Individualize math instruction.

64. Use students' special vocational interests to motivate them to develop their math skills.

65. Provide practical math application activities (compute income tax, balance checkbook, compute supply orders).

66. Provide simulated and real-life opportunities for math usage (e.g., business situations).

67. Use audiovisual aids to teach and reinforce math concepts.

68. Use tutors (e.g., students, retirees, volunteers) to aid students in improving math skills.

69. Assist students in using self-evaluation techniques.

Assist Students in Improving Their Survival Skills

70. Accept your responsibility in the provision of survival skills instruction.

71. Assist students in clarifying their values.

72. Assist students in setting realistic short-term and long-term goals.

73. Assist students in developing personal decision-making skills.

74. Assist students in dealing with a multiplicity of adult roles and responsibilities.

75. Promote good safety habits.

76. Assist students in developing appropriate personal hygiene and nutrition habits.

77. Assist students in develping time management skills.

78. Provide opportuntiies for students to improve their interpersonal relationship skills (e.g., through the student vocational organization).

79. Assist students in developing personal financial skills.

80. Help students to become more knowledgeable consumers.

81. Teach students to use reference books (e.g., telephone book, dictionary, maps, thesaurus).

82. Help students to identify, understand, and use sources of career information.

83. Prepare students to find, obtain, retain, and exit employment.

84. Assist students in developing an awareness of their legal rights and responsibilities on the job (e.g., minimum wages).

85. Assist students in developing an awareness of their rights, responsibilities, and benefits as employees (e.g., company policy, insurance benefits, and promotion policy).

APPENDIX B

INFORMATION SHEET FOR INTERVIEWEES

When We Say . . .	We Mean . . .
1. Teaching basic skills	1. Helping secondary students to improve their basic skills.
2. Basic skill areas	2. Reading, writing, oral communications, math, and survival skills.
3. Survival skills	3. Such skills/knowledge as: goal-setting ability; decision-making skills; good safety habits; time management skills; the ability to find, obtain, retain, and exit employment; and an awareness of employees' legal rights and responsibilities.
4. A teacher competency	4. A skill a teacher needs.

Examples of Teacher Competencies Needed for Teaching Basic Skills

Basic Skill Area	Teacher Competencies
1. Reading	1. Identify the reading skills required for entry into the trade/vocation. Assess students' reading abilities. Diagnose students' reading problems and reading levels. Create a classroom environment conducive to reading. Teach appropriate technical and related vocabulary.
2. Writing	2. Identify the writing skills required for entry into the trade/vocation. Assess students' writing abilities. Diagnose students' writing problems (spelling, clarity, punctuation, grammar). Provide model formats for written materials (memos, reports, business letters, work orders). Individualize writing instruction.

3. Oral communication	3. Identify the oral communication skills required for entry into the trade/ vocation. Assess students' oral communication skills (speaking and listening). Diagnose students' oral communication problems (e.g., grammar, pronunciation, clarity). Ask students to repeat written and oral instructions to ensure their understanding. Provide opportunities for students to practice their listening skills.
4. Math	4. Identify the math skills required for entry into the trade/vocation. Identify the math skills required to succeed in the vocational program. Assess the students' math skills. Diagnose students' math deficiencies (e.g., inability to add and subtract). Use students' special vocational interest to motivate them to develop their math skills.
5. Survival skills	5. Assist students in clarifying their values. Assist students in dealing with a multiplicity of adult roles and responsibilities. Provide opportunities for students to improve their interpersonal relationship skills (e.g., through the student vocational organization). Teach students to use reference books (e.g., telephone book, dictionary, maps, thesaurus). Help students to identify, understand, and use sources of career information.

APPENDIX C

POTENTIALLY USEFUL PRINTED MATERIALS

In addition to the materials described in the responses to research question F (What techniques are being used to train teachers to teach basic skills?), the following materials have been located by project staff.

The Teaching Basic Skills through Vocational Education project, carried out by the Cornell Institute for Occupational Education, has made available a Teacher Guide and Resource Guide (Dunn, Gray, and Martini, undated). The Teacher Guide covers teaching mathematics skills, reading skills, writing skills, and oral communications skills in vocational education. It also provides twenty-five sample lesson ideas. The Resource Guide includes sections on assessing student needs, reading difficulty of vocational materials, sources of supplementary instructional materials, and documents of possible interest.

Reading

The West Virginia Vocational Curriculum Laboratory has developed Do You Read Me Good Buddy?, a compendium of prevocational-vocational reading development activities (Harris and Kendall, 1978). It includes activities for reading development, evaluation, socialization, word recognition, vocabulary, and comprehension. Luparelli (1981) provides ideas for a reading program for vocational classes. Incardone (1978) discusses the three areas of technical subject matter reading skills--common-sight reading skills, textbook/manual skills, and shop/lab/ classroom skills, and provides suggestions for assisting students in the three areas. Suggestions for improving vocabulary and reading skills are provided by Conway (1981). She suggests such techniques as bingo games, jigsaw puzzles, card games, bulletin boards, flash cards, and bubblegrams.

Writing

Pearce (1978) provides a listing of do's and don't's for helping students produce more understandable writing. Mrachek (1980) provides some standards for writing to enable vocational students to survive on the job. Jackson (1977) discusses writing and composition skills in the context of business communications classes.

Oral Communication

Jackson (1977) discusses techniques for oral communication skills in business situations.

Math

Boger (1979) provides information on an occupational math laboratory in a county vocational-technical school. She indicates that students showed an average improvement of nearly 22 percent on their total scores from pretest to posttest.

Survival Skills

Siefferman (1981) provides information on materials and teaching methods for teaching employability skills in the vocational classroom. King and Knight (1979) describe workshops on survival techniques for beginning trade and industrial and health occupations teachers.

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